

APPENDIX 3

**BIOLOGICAL RESOURCES
ASSESSMENT**



Biological Resources Assessment & Aquatic Resources Delineation Technical Report

Inland Valley Infrastructure Corridor Program

*City of Highland, City of San Bernardino, & County of San Bernardino,
California*

May 15, 2024

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1 Introduction

On behalf of Tom Dodson & Associates, HDR, Inc. (HDR) has prepared this Biological Resources Assessment (BRA) and Aquatic Resources Delineation (ARD) technical report for the proposed Inland Valley Infrastructure Corridor (IVIC) Program located in the City of Highland, City of San Bernardino, and unincorporated San Bernardino County, California. The IVIC Program is a focused effort to provide comprehensive infrastructure improvements for water, sewer, circulation system, and stormwater drainage that resolve longstanding flooding and hydrology issues and that are adequately financed to meet future system needs. Circulation system improvements are intended to efficiently connect future and existing development to the existing interstate system, while providing safe spaces for pedestrians, cyclists, transit, and motor vehicles along 3rd, 5th and 6th Streets and gateway nodes.

The IVIC Program is the result of years of input and effort by the Inland Valley Development Agency (IVDA) and participating agencies working with IVDA to implement the Program including: the City of Highland; City of San Bernardino; the Yuhaaviatam of San Manuel Nation (YSMN); and the East Valley Water District (EVWD). The IVIC Program represents a long-range infrastructure program that will be installed over a 20-year horizon. The Program area covers territory within three jurisdictions—the City of Highland, City of San Bernardino, and County of San Bernardino—and the coordination of infrastructure concurrent with development of the Program area is necessary to serve the whole of the area harmoniously. The IVIC will ensure that infrastructure improvements necessary to support the development of this area that has been forecast to occur pursuant to the respective jurisdictions' General Plan are implemented consistently across jurisdictional lines by the two cities. IVDA, a joint powers agency with responsibilities in both cities and intervening unincorporated areas, will assume the lead in managing the preparation of the IVIC Program and the environmental documentation required to comply with the California Environmental Quality Act (CEQA).

The BRA fieldwork was conducted by HDR biologist Eric Weis in April and May of 2024. The purpose of the BRA survey was to address potential effects of the proposed IVIC Program (Project) on designated Critical Habitats and/or any species currently listed or formally proposed for listing as endangered or threatened under the federal Endangered Species Act (ESA) and/or the California Endangered Species Act (CESA), as well as any species otherwise designated as sensitive by the California Department of Fish and Wildlife (CDFW [formerly California Department of Fish and Game]) and/or the California Native Plant Society (CNPS).

The IVIC Program area was assessed for sensitive species known to occur locally. Attention was focused on those state and/or federally listed as threatened or endangered species and California Fully Protected species that have been documented in the vicinity of the Program area, whose habitat requirements are present within or adjacent to the proposed Project footprint. Results of the habitat assessment are intended to provide sufficient baseline information to the Project Proponents (IVDA and its partners), City and County planning officials and, if required, federal and state regulatory agencies, including the U.S. Fish and Wildlife Service (USFWS) and CDFW, respectively, to determine if the IVIC Program is likely to result in any adverse effects on sensitive biological resources and to identify mitigation measures to offset those effects.

In addition to the BRA survey, the IVIC Program area was also assessed for the presence of state and/or federal jurisdictional aquatic resources potentially subject to regulation by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and Porter Cologne Water Quality Control Act, and CDFW under Section 1602 of the California Fish and Game Code (FGC), respectively.

1.1 Project Description

The primary goal of the IVIC is to provide the necessary infrastructure improvements to the IVIC Program area through a collaborative effort with IVDA partners to benefit the entire Program area, and greater area surrounding the Program utilizing this IVIC. The IVIC Program will consist of four (4) main Project components:

- **Water** – Enhance potable water distribution system and expand the potential for utilization of recycled water in the future.
- **Sewer** – Support sewer capacity and upgrade sewer system to meet projected demand.
- **Roadways** – Improve traffic circulation, safety, mobility, and roadway conditions.
- **Stormwater Drainage** – Address longstanding flooding issues within the IVIC Program area by improving and expanding the capacity of drainage systems.

1.1.1 Water System Improvements

The proposed water system improvements will include the following projects:

- **Project 1** – 3.5 MG storage reservoir located in the EVWD's Lower Zone; and
- **Project 2** – New Well 01 in the EVWD's Intermediate Zone.

These recommended improvements to the existing EVWD system will be installed to enhance the existing robust distribution system to meet modern industry standards. The specific locations for these improvements have not yet been determined. Therefore, additional analysis to assess potential Project effects on sensitive biological resources and/or jurisdictional waters will be necessary once specific locations for these water system improvements have been determined. The horizon for installation of these water facilities is within the next 20 years.

1.1.2 Sewer System Improvements

The proposed sewer system improvements will include the following projects:

- **Project E-1** would upsize 5,900 feet of 27 to 48-inch pipe with 36 to 54-inch pipe, including a possible siphon upsize.
- **Project E-4** would upsize 15,000 feet of 21 to 24-inch pipe with 30-inch pipe starting at Tippecanoe Street on 6th Street which would traverse east to Victoria Street then south to 5th Street then traverse east on 5th Street to Palm Avenue.
- **Project B-2** would upsize 2,200 feet of 15-inch pipe with 18-inch pipe, including a possible siphon upsize.

The proposed sewer system improvements will be constructed within existing paved roadways in the Program area, shown on Figures 2-3, Pages 6-7.

1.1.3 Stormwater Drainage System Improvements

A study of the IVIC Program area hydrology conducted by JLC Engineering & Consulting, Inc. in April of 2020 determined that downstream (west) of Victoria Avenue, the City Creek Bypass Channel (CCBC) is insufficient to convey the 100-year flood flows in its current configuration. The CCBC is located along 3rd and 5th Streets and extends west from City Creek, just north of the State Route 210

(SR-210) and 5th Street Interchange, to its confluence with East Twin Creek Channel approximately 0.8 miles downstream (west) of Tippecanoe Avenue (Figures 2-3, Pages 6-7). The 2020 hydrology study includes a new channel design (two alternatives) that will need to be installed to have sufficient capacity to convey the future 100-year flood flows between Victoria Avenue (just north of the San Bernardino International Airport [SBIA] and south of 3rd Street) and the East Twin Creek Channel. For planning and impact forecast purposes it is assumed that a maximum of one-half mile of new channel will be installed in any given year. Additional storm drain infrastructure will likely be required to provide flood protection for future development that may occur consistent with the existing General Plan land use designations. The purpose of the storm drain infrastructure is to provide flood protection and to meet the street design policies within the City of San Bernardino and the City of Highland. The horizon for installation of the drainage improvements is within the next 20 years.

1.1.4 Circulation System Infrastructure Improvements

General Plan build-out capacities for existing roadways within the IVIC Program area include:

- **Del Rosa Drive** – Upgrade current undivided 2-lane configuration to a Major Arterial configuration (up to 8 lanes; may have raised medians) beginning at 3rd Street (to the south), extending north to 6th Street.
- **6th Street** – Upgrade current undivided 2-lane configuration to a Collector Street configuration (up to 2 lanes; 66-foot road right-of-way) beginning at Church Avenue (to the east), with the potential for improvements extending west to Tippecanoe Avenue.
- **5th Street** – Upgrade configurations consisting of undivided 2-lane (I-215 NB Ramps to E Street), divided 4-lane (E Street to Waterman Avenue), undivided 2-lane (Waterman Avenue to Victoria Avenue), and divided 4-lane (Victoria Avenue to SR-210 Eastbound Ramps) to a Major Highway configuration from Tippecanoe Avenue to Palm Avenue (4-lane, 80-foot roadways) and Primary Arterial configuration from Palm Avenue to SR-210 (up to 6 lanes; 96-foot roadways, curb-to-curb, within a minimum of 112-foot rights-of-way).
- **3rd Street** – Upgrade current undivided 4-lane configuration to a Major Highway from Victoria Avenue to Church Avenue (4-lane, 80-foot roadways), a Primary Arterial from Tippecanoe to N Leland Norton Way (up to 6 lanes; 96-foot roadways, curb-to-curb, within a minimum of 112-foot rights-of-way), and a Major Arterial from N Leland Norton Way to Victoria Avenue (up to 8 lanes; may have raised medians).
- **Tippecanoe Avenue** – Upgrade current undivided 4-lane configuration to a Secondary Highway from 3rd Street to 9th Street (4-lane roadway with a raised median and has a typical right-of-way width of 88 feet and a curb-to-curb pavement width of approximately 64 feet).
- **Sterling Avenue** – Upgrade current undivided 2-lane configuration to a Major Arterial from 3rd Street to the City of San Bernardino's Boundary just south of 6th Street (up to 8 lanes; may have raised medians), a Major Highway from the City of Highland's boundary just south of 6th Street (4-lane, 80-foot roadways), and a Major Arterial from Pacific Street to SR-210 (up to 8 lanes; may have raised medians).
- **Lankershim Avenue** – Upgrade current undivided 2-lane configuration to a Secondary Arterial from 3rd Street to 5th Street (up to 4 lanes) and a Collector Street from 5th Street north to the City of Highland's Boundary (up to 2 lanes; 66-foot road right-of-way).

- **Victoria Avenue** – Upgrade current undivided 4-lane configuration to a Major Highway from 3rd Street to Highland Avenue (4 Lane, 80-foot roadways [including a 12-foot median] curb-to-curb, within 104-foot rights-of-way).
- **Cunningham Street** – Upgrade current undivided 2-lane configuration to a Collector Street (up to 2 lanes; 66-foot road right-of-way) beginning at 5th Street, with the potential for improvements extending north to 6th Street.
- **Central Avenue** – Upgrade current undivided 2-lane configuration to a Collector Street (up to 2 lanes; 66-foot road right-of-way) beginning at 5th Street, with the potential for improvements extending north to 6th Street.
- **Palm Avenue** – Upgrade current 2-lane configuration (with a center queueing lane) to a Major Highway from 3rd Street to Base Line (4-lane, 80-foot roadways [including a 12-foot median] curb-to-curb, within 104-foot rights-of-way).
- **Church Avenue** – Upgrade current undivided 2-lane configuration to a Collector Street (up to 2 lanes; 66-foot road right-of-way) beginning at 3rd Street, with the potential for improvements extending north to 6th Street.

The preceding roadway segments within the IVIC Program area represent about 10 miles (Figures 2-3, Pages 6-7). Thus, it is anticipated that up to about 25 miles of new lane additions (single lane) will need to be installed over the estimated 20-year period. Up to two miles of new lane addition, plus curb and gutter improvements, are expected to be constructed per year. It is anticipated that as the area experiences growth in development, that roadway improvements will be installed gradually as the need for expanded roadway capacity becomes evident. However, IVDA and/or the local jurisdictions will seek opportunities to obtain grants or funding for specific roadway segments as identified above.

1.2 Project Location

The IVIC Program area is generally located approximately 60 miles east of Los Angeles, just south of the foothills of the San Bernardino Mountains within the following Sections, Township, and Ranges (San Bernardino Base Meridian) in the City of Highland, City of San Bernardino, and unincorporated San Bernardino County, California (Figures 1-2, Pages 5-6):

- Sections 4, 5, and 6 of Township 1 South, Range 3 West; and
- Sections 1, 11, and 12 of Township 1 South, Range 4 West.

The Program area is depicted on the *San Bernardino South* and *Redlands* U. S. Geological Survey's (USGS) 7.5-Minute Series Quadrangle maps. Specifically, the IVIC Program area is located immediately north of the SBIA, and the Program area extends to the north side of 6th Street. The western boundary extends to the terminus of the CCBC, where it converges with East Twin Creek, which is about a quarter of a mile to the east of Waterman Avenue and 0.8 mile west of Tippecanoe Avenue. The IVIC Program area is bounded to the east by the SR-210 freeway. 3rd Street in both cities and 5th Street in the City of Highland serve as the southern boundary of the Program area (Figures 2-3, Pages 6-7).

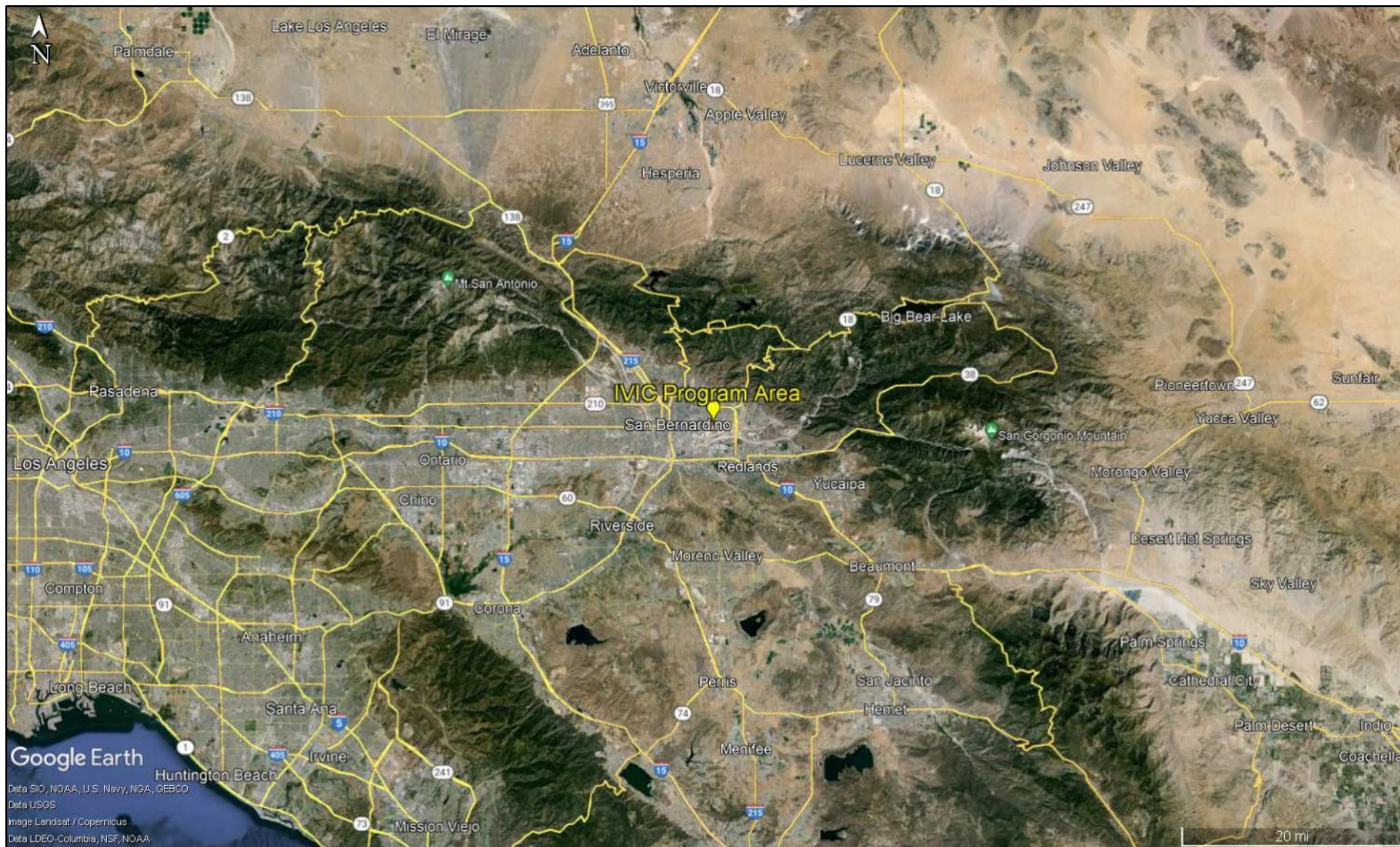


Figure 1. Regional Vicinity Map

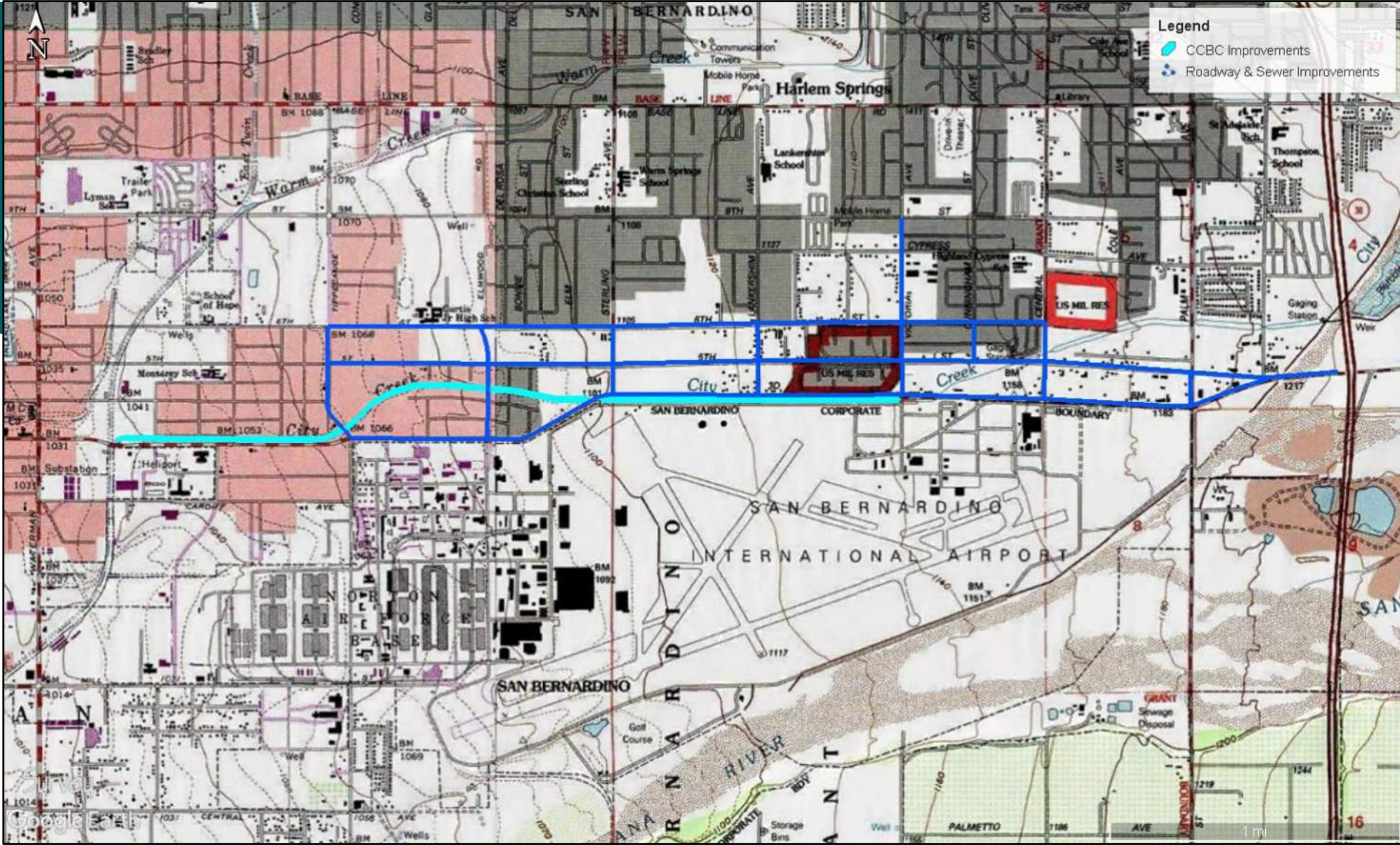


Figure 2. Topographic Map of IVIC Program Area

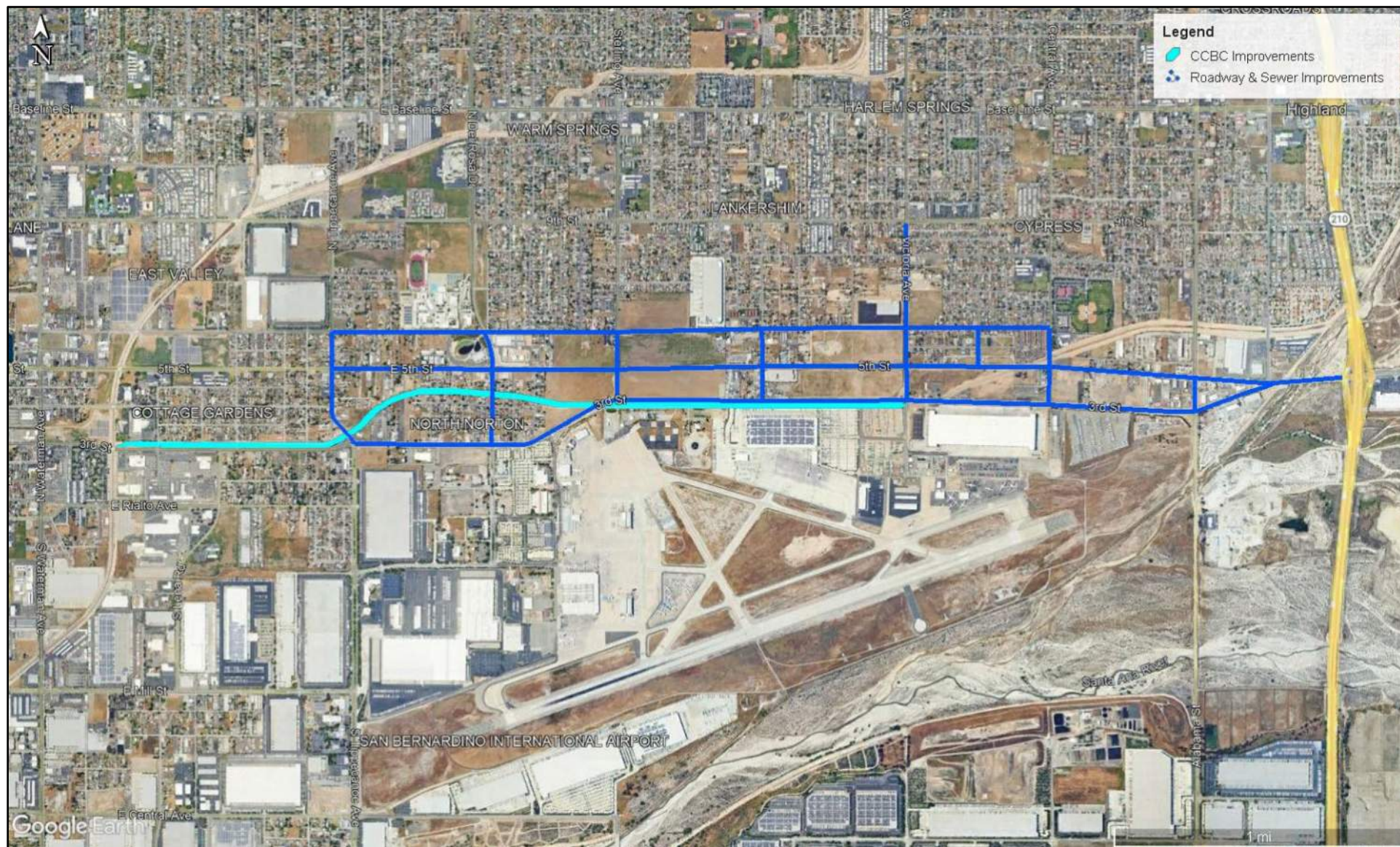


Figure 3. Aerial Photograph of IVIC Program Area

1.3 Environmental Setting

The IVIC Program area is situated in the geographically based ecological classification known as the Inland Valleys – Level IV ecoregion, of the Southern California/Northern Baja Coast – Level III ecoregion (Griffith et al. 2016). The goal of regional ecological classifications is to reduce variability based on spatial covariance in climate, geology, topography, climax vegetation, hydrology, and soils. The Inland Valleys ecoregion is a heavily urbanized ecoregion that historically consisted of the alluvial fans and basin floors immediately south of the San Gabriel and San Bernardino Mountains (Griffith et al. 2016).

Elevations within the IVIC Program area range from approximately from 1,470 feet to 1,500 feet above mean sea level (amsl). The terrain is essentially level, with a gradual increase in elevation to the north and east. The only distinctive topographic feature that exists adjacent to the proposed Project footprint is City Creek, which flows under 5th Street between Church Avenue and SR-210. Surface runoff within the Program area generally flows to the south and west.

The IVIC Program area is within a hot-summer Mediterranean climate (Csa), subject to both seasonal and annual variations in temperature and precipitation. Average annual maximum temperatures within the Program area peak at 96.2 degrees Fahrenheit (° F) in July and August and fall to an average annual minimum temperature of 38.5° F in January. Average annual precipitation is greatest from November through April and reaches a peak in February (3.25 inches). Precipitation is lowest in the month of July (0.04 inches). Annual total precipitation averages 16.12 inches.

Hydrologically, the IVIC Program area is situated within the Bunker Hill Hydrologic Sub-Area (HSA 801.52). The Bunker Hill HSA comprises a 124,791-acre drainage area, within the larger Santa Ana Watershed (HUC 18070203). The Santa Ana River is the major hydrogeomorphic feature within the Santa Ana Watershed. The closest tributary to the Santa Ana River is City Creek, which flows north to south through the easternmost end of the Program area.

According to the U.S. Department of Agriculture, Natural Resources Conservation Service's (USDA-NRCS) Web Soil Survey, the IVIC Program area is mapped within the following soil types:

- *Tujunga gravelly loamy sand, 0 to 9 percent slopes*: Tujunga gravelly loamy sands consist of gravelly loamy sand and gravelly sand horizons comprised of alluvium derived from granite. This soil type is somewhat excessively drained, with very low runoff, and has not been identified as a hydric soil.
- *Tujunga loamy sand, 0 to 5 percent slopes*: Tujunga loamy sands consist entirely of loamy sand horizons comprised of alluvium derived from granite. This soil type is also somewhat excessively drained, with very low runoff, and has not been identified as a hydric soil.
- *Hanford coarse sandy loam, 2 to 9 percent slopes*: Hanford family soils consist of sandy loam and fine sandy loam horizons comprised of alluvium derived from granite. This soil type is well drained, with low runoff, and has not been identified as a hydric soil.
- *Psammets, Fluvents and Frequently flooded soils*: Psammets and Fluvents consist of sand, fine sand, and stratified gravelly sand to gravelly loamy sand horizons comprised of sandy alluvium. These soils are somewhat excessively drained, with very low runoff, and have not been identified as hydric soils.
- *Grangeville fine sandy loam, saline-alkali*: Grangeville family soils consist of fine sandy loam and sandy loam horizons comprised of alluvium derived from granite. This soil type is

somewhat poorly drained, with low runoff, and has a minor component that has been identified as a hydric soil.

- *Soboba stony loamy sand, 2 to 9 percent slopes*: Soboba stony loamy sands consist of stony loamy sand, very stony loamy sand, and very stony sand horizons comprised of alluvium derived from granite. This soil type is excessively drained, with low runoff, and has not been identified as a hydric soil.
- *Soboba gravelly loamy sand, 0 to 9 percent slopes*: Soboba gravelly loamy sands consist of gravelly loamy sand, very gravelly loamy sand, and very stony sand horizons comprised of alluvium derived from granite. This soil type is excessively drained, with low runoff, and has not been identified as a hydric soil.

Given that the roadway and sewer improvement components are entirely within existing paved streets and adjacent curb, gutter, and sidewalks, soils within the proposed footprint for these Project components are likely comprised mostly of fill material. Please refer to Appendix D for a soil map of the Program Area.

The IVIC Program area is in an urban landscape containing a mix of uses, with most recent growth consisting of warehouses, logistics centers, and other business park uses, consistent with the City of Highland's General Plan. Much of the land in the center of the Program area is designated for residential use by the City of San Bernardino's current General Plan, which is presently being updated. Adjacent properties consist of vacant land to the west and south, single-family homes to the east, and educational facilities (Liberty High School) to the north. Existing land uses surrounding the IVIC Program area include:

- **North** – Immediately north of 6th Street, single- and multi-family residential properties
- **East** – Immediately west of Interstate 210, industrial land uses
- **South** – SBIA and industrial uses
- **West** – Commercial, residential, and institutional

A small man-made drainage channel (CCBC) crosses through the central-southern portion of the Program area and continues west to its confluence with East Twin Creek, which is the western limit of the IVIC Program area. Most natural vegetation has been removed by past agricultural activities, and most trees and shrubs occurring in the Program area are found where limited human landscaping occurs. However, 5th Street crosses City Creek between Church Avenue and SR-210 at the easternmost end of the Program area, and City Creek supports a mix of *Lepidospartum squamatum* Shrubland Alliance (scale broom scrub) and *Baccharis salicifolia* Shrubland Alliance (mulefat thicket) habitats along its floodplain. The portion of 5th Street between Church Avenue and SR-210 is also adjacent the Upper Santa Ana River Wash Habitat Conservation Plan (Wash Plan) boundary, which encompasses the entire span of City Creek and its adjacent terrace on both sides of 5th Street between Church Avenue and SR-210. The San Bernardino Valley Water Conservation District is the lead Permittee for the Wash Plan and its Task Force partners include the City of Highland and County of San Bernardino.

2 Assessment Methodology

2.1 Biological Resources Assessment

Data regarding biological resources in the vicinity of the IVIC Program were obtained through literature review, desktop evaluation, and field investigation. Prior to performing the field survey, available databases, and documentation relevant to the Program Area were reviewed for documented occurrences of sensitive species that could potentially occur in the Program vicinity. The USFWS Information for Planning and Consultation System (IPaC) and threatened and endangered species occurrence GIS overlay, as well as the most recent versions of the California Natural Diversity Database (CNDDB) and California Native Plant Society Electronic Inventory (CNPSEI) databases, were searched for sensitive species data in the *San Bernardino South*, *Redlands*, *San Bernardino North*, and *Harrison Mountain* USGS 7.5-Minute Series Quadrangles. These databases contain records of reported occurrences of state and federally listed species or otherwise sensitive species and habitats that may occur within the vicinity of the Subject Parcel (within approximately 3 miles). Other available technical information on the biological resources of the area was also reviewed including previous surveys and recent findings.

2.1.1 Biological Resources Assessment Field Survey

HDR biologist Eric Weis conducted a biological resources assessment of the IVIC Program area on April 8, 26, and 28, and May 2, 2024. Wildlife species were detected during field surveys by sight, calls, tracks, scat, and/or other sign. In addition to species observed, expected wildlife usage of the site was determined based on known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. The focus of the faunal species survey was to identify potential habitat for special status wildlife that may occur within the Program vicinity.

Burrowing Owl Habitat Assessment

The reconnaissance-level field survey included a burrowing owl (*Athene cunicularia* [BUOW]) habitat suitability assessment survey, which consisted of a pedestrian survey that encompassed the entire Program area and included 100 percent visual coverage of the proposed Project footprint and adjacent 500-foot survey buffer within any adjacent undeveloped areas. The BUOW habitat assessment survey was conducted in accordance with the “Burrowing Owl Survey Protocol and Mitigation Guidelines” prepared by the California Burrowing Owl Consortium (1993), and the March 7, 2012 “California Department of Fish and Game Staff Report on Burrowing Owl Mitigation.”

The survey was conducted on a calm weather days, during peak BUOW activity between the morning hours of 0630 and 1030. Weather conditions during the survey ranged from clear skies to 100 percent cloud cover, with very light intermittent rain, and temperatures from 40° F to 78° F. Wind speeds during survey were calm, ranging from 0 to 10 mph. The survey consisted of walking transects spaced approximately 30 feet apart to provide 100 percent visual coverage of the ground surface within the survey area, which included all adjacent undeveloped areas within the 500-foot survey buffer and the entire CCBC.

During the pedestrian survey, Mr. Weis looked for BUOW sign including, burrows, molted feathers, cast pellets, prey remains, owl whitewash, and suitable surrogate burrows. The survey area was also assessed for soil type and level of friability as well as habitat type and habitat structure. Natural and

non-natural substrates were examined for potential burrow sites. All potentially suitable burrows encountered were examined for indications of BUOW presence.

2.2 Aquatic Resources Delineation

HDR also evaluated the proposed Project footprint for the presence of riverine/riparian/wetland habitat and jurisdictional aquatic resources, i.e., Waters of the U.S. (WOTUS), as regulated by the USACE and RWQCB, and/or jurisdictional streambed and associated riparian habitat as regulated by the CDFW. Prior to the field visit, aerial photographs of the Project Area were viewed and compared with the surrounding USGS 7.5-Minute Topographic Quadrangle maps to identify drainage features within the survey area as indicated from topographic changes, blue-line features, or visible drainage patterns. The USFWS National Wetland Inventory (NWI) and Environmental Protection Agency (EPA) Water Program “My Waters” Google Earth Pro data layers were also reviewed to determine whether any hydrologic features and wetland areas had been documented within the vicinity of the site. Similarly, the United States Department of Agriculture (USDA) – Natural Resources Conservation Service (NRCS) “Web Soil Survey” was reviewed for soil types found within the Project Area to identify the soil series in the area and to check these soils to determine whether they are regionally identified as hydric soils. Upstream and downstream connectivity of waterways (if present) were reviewed on Google Earth Pro aerial photographs and topographic maps to determine jurisdictional status. The lateral extent of potential USACE jurisdiction was measured at the Ordinary High Water Mark (OHWM) in accordance with regulations set forth in 33CFR part 328 and the USACE guidance documents listed below:

- *USACE – Corps of Engineers Wetlands Delineation Manual, Wetlands Research Program Technical Report Y-87-1 (on-line edition), January 1987 - Final Report.*
- *USACE – Jurisdictional Determination Form Instructional Guidebook (JD Form Guidebook), May 30, 2007.*
- *USACE – A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (A Delineation Manual), August 2008.*
- *USACE – Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), September 2008.*
- *USACE – Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (Minimum Standards), January 2016.*

To be considered a *jurisdictional wetland* under the federal CWA, Section 404, an area must possess three (3) wetland characteristics: *hydrophytic vegetation*, *hydric soils*, and *wetland hydrology*.

- ▶ **Hydrophytic vegetation:** Hydrophytic vegetation is plant life that grows, and is typically adapted for life, in permanently or periodically saturated soils. The hydrophytic vegetation criterion is met if more than 50 percent of the dominant plant species from all strata (tree, shrub, and herb layers) is considered hydrophytic. Hydrophytic species are those included on the 2018 National Wetland Plant Lists for the Arid West Region (USACE 2018). Each species on the lists is rated with a wetland indicator category, as shown in Table 1. To be considered hydrophytic, the species must have *wetland indicator status*, i.e., be rated as OBL, FACW or FAC.

Table 1. Wetland Indicator Vegetation Categories

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (estimated probability >99%)
Facultative Wetland (FACW)	Usually occur in wetlands (estimated probability 67 to 99%)
Facultative (FAC)	Equally likely to occur in wetlands and non-wetlands (estimated probability 34 to 66%)
Facultative Upland (FACU)	Usually occur in non-wetlands (estimated probability 67 to 99%)
Obligate Upland (UPL)	Almost always occur in non-wetlands (estimated probability >99%)

- **Hydric Soil:** Soil maps from the USDA-NRCS Web Soil Survey (USDA 2023) were reviewed for soil types found within the Project Area. Hydric soils are saturated or inundated long enough during the growing season to develop anaerobic conditions that favor growth and regeneration of hydrophytic vegetation. There are several indirect indicators that may signify the presence of hydric soils including hydrogen sulfide generation, the presence of iron and manganese concretions, certain soil colors, gleying, and the presence of mottling. Generally, hydric soils are dark in color or may be gleyed (bluish, greenish, or grayish), resulting from soil development under anoxic (without oxygen) conditions. Bright mottles within an otherwise dark soil matrix indicate periodic saturation with intervening periods of soil aeration. Hydric indicators are particularly difficult to observe in sandy soils, which are often recently deposited soils of flood plains (entisols) and usually lack sufficient fines (clay and silt) and organic material to allow use of soil color as a reliable indicator of hydric conditions. Hydric soil indicators in sandy soils include accumulations of organic matter in the surface horizon, vertical streaking of subsurface horizons by organic matter, and organic pans.

The hydric soil criterion is satisfied at a location if soils in the area can be inferred or observed to have a high groundwater table, if there is evidence of prolonged soil saturation, or if there are any indicators suggesting a long-term reducing environment in the upper part of the soil profile. Reducing conditions are most easily assessed using soil color. Soil colors were evaluated using the Munsell Soil Color Charts (Munsell 2000). Soil pits are dug (when necessary) to an approximate depth of 16-20 inches to evaluate soil profiles for indications of anaerobic and redoximorphic (hydric) conditions in the subsurface.

- **Wetland Hydrology:** The wetland hydrology criterion is satisfied at a location based upon conclusions inferred from field observations that indicate an area has a high probability of being inundated or saturated (flooded, ponded, or tidally influenced) long enough during the growing season to develop anaerobic conditions in the surface soil environment, especially the root zone (USACE 1987 and USACE 2008)

Evaluation of CDFW jurisdiction followed guidance in the FGC and “A Review of Stream Processes and Forms in Dryland Watersheds” (CDFW, 2010). Specifically, CDFW jurisdiction would occur where a stream has a definite course showing evidence of where waters rise to their highest level and to the extent of associated riparian vegetation.

3 Results

3.1 Existing Biological and Physical Conditions

The IVIC Program area consists of approximately 23,100 linear feet of sewer improvements and up to 25 miles of roadway improvements within existing City streets, as well as channel improvements within approximately 14,700 linear feet of the existing man-made CCBC. As previously discussed, the IVIC Program includes water system improvements consisting of a 3.5 MG storage reservoir and new well, but specific locations for these Project components have not yet been determined. Existing disturbances within the Program area include vehicular and pedestrian traffic, airport and other commercial/industrial operations, periodic discing/vegetation removal, dumping, and litter.

3.1.1 Habitat

The proposed Project footprint is completely disturbed and no longer supports any native habitat. Areas adjacent the proposed Project footprint consist mostly of commercial/industrial and residential development and disturbed vacant land, with some native scale broom scrub or Riversidean Alluvial Fan Sage Scrub (RAFSS) and mulefat thicket (Southern Riparian Scrub) habitat present adjacent the easternmost portion of 5th Street, between Church Avenue and SR-210. Adjacent vacant land throughout most of the IVIC Program area supports dense ruderal vegetation dominated by nonnative grasses (*Avena* spp., *Bromus* spp.), mustard (*Hirschfeldia incana*), and Russian thistle (*Salsola tragus*). CCBC is mostly unvegetated, with scattered patches of nonnative grasses, spiny sowthistle (*Sonchus asper*), and other ruderal species.

City Creek supports a mix of RAFSS and riparian scrub habitat adjacent 5th Street, between Church Avenue and SR-210. The active City Creek floodplain consists of sparsely vegetated braided channel dominated by mule fat and other shrubby vegetation, with scattered emergent Fremont cottonwood (*Populus fremontii*). RAFSS habitat on the City Creek channel slopes and adjacent terrace is dominated by deerweed (*Acmispon glaber*), California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), brittlebush (*Encelia farinosa*), and telegraph weed (*Heterotheca grandiflora*).

A complete list of plant species identified within the Program area during the BRA-ARD field survey is included in Appendix C.

3.1.2 Wildlife

The IVIC Program area is in an urban setting and most species expected to occur within the Program area are those adapted to disturbed environments. During the field surveys, special attention was focused on those Project components that are adjacent vacant parcels and other undeveloped areas (i.e. City Creek), where special status species are more likely to occur.

Amphibians and Reptiles

The only herp species observed or otherwise detected within the Project Area during the reconnaissance level survey were Great Basin fence lizard (*Sceloporus occidentalis longipes*) and western side-blotched lizard (*Uta stansburiana elegans*).

Birds

Birds were the most observed wildlife group within the Program area and species observed or otherwise detected during the field surveys included:

- Red-tailed Hawk (*Buteo jamaicensis*)
- California Quail (*Callipepla californica*)
- Killdeer (*Charadrius vociferus*)
- Lesser Nighthawk (*Chordeiles acutipennis*)
- Rock Pigeon (*Columba livia*)
- Common Raven (*Corvus corax*)
- American Kestrel (*Falco sparverius*)
- House Finch (*Haemorhous mexicanus*)
- Dark-eyed Junco (*Junco hyemalis*)
- Song Sparrow (*Melospiza melodia*)
- California Towhee (*Melospiza crissalis*)
- Northern Mockingbird (*Mimus polyglottos*)
- House Sparrow (*Passer domesticus*)
- Cliff Swallow (*Petrochelidon pyrrhonota*)
- Bushtit (*Psaltiriparus minimus*)
- Great-tailed Grackle (*Quiscalus mexicanus*)
- Say's Phoebe (*Sayornis saya*)
- Lesser Goldfinch (*Spinus psaltria*)
- Northern Rough-winged Swallow (*Stelgidopteryx serripennis*)
- Eurasian Collared-Dove (*Streptopelia decaocto*)
- European Starling (*Sturnus vulgaris*)
- Western Kingbird (*Tyrannus verticalis*)
- Mourning Dove (*Zenaida macroura*)

Mammals

Mammal species observed or otherwise detected within the Program area during the field surveys included California ground squirrel (*Otospermophilus beecheyi*), desert cottontail (*Sylvilagus audubonii*), Botta's pocket gopher (*Thomomys bottae*), and domestic cats and dogs. It should be noted that many mammal species expected to occur in the Program area are nocturnal and not likely to be observed during the daytime field surveys. Additionally, no focused small mammal trapping surveys were conducted as part of the BRA field survey effort.

3.2 Special Status Species and Habitats

According to the CNDDDB, 96 sensitive species (39 plant species, 57 animal species) and six sensitive habitats have been documented in the *San Bernardino South, Redlands, San Bernardino North, and Harrison Mountain* USGS 7.5-Minute Series Quadrangles. This list of sensitive species and habitats includes any state and/or federally listed or proposed for listing as threatened or endangered species, California Fully Protected species, CDFW designated Species of Special Concern (SSC), and otherwise Special Animals. “Special Animals” is a general term that refers to all the taxa the CNDDDB is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of “species at risk” or “special status species.” The CDFW considers the taxa on this list to be those of greatest conservation need.

The USFWS IPaC search identified four additional special status species as potentially occurring in the regional vicinity of the IVIC Program. A complete list of all special status species identified by the IPaC, CNDDDB, and CNPSEI databases as potentially occurring in the Project vicinity is provided in Appendix F. Of the 100 sensitive species identified by the CNDDDB and IPaC queries, 28 are state and/or federally listed or proposed for listing as threatened or endangered species. However, only the following 13 have been documented in the Program vicinity (within approximately 3 miles):

- Marsh sandwort (*Arenaria paludicola*)
- Swainson's hawk (*Buteo swainsoni*)
- Salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*)
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)
- San Bernardino kangaroo rat (*Dipodomys merriami parvus*)
- Slender-horned spineflower (*Dodecahema leptoceras*)
- Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*)
- Quino checkerspot butterfly (*Euphydryas editha quino*)
- California black rail (*Laterallus jamaicensis coturniculus*)
- Gambel's water cress (*Nasturtium gambelii*)
- Steelhead – southern California DPS (*Oncorhynchus mykiss irideus* pop. 10)
- Coastal California gnatcatcher (*Polioptila californica californica*)
- Least Bell's vireo (*Vireo bellii pusillus*)

However, the documented occurrences for marsh sandwort, salt marsh bird's-beak, western yellow-billed cuckoo, Quino checkerspot butterfly, California black rail, Gambel's water cress, and southern steelhead represent historic occurrences. These species are no longer considered to be extant within the IVIC Program vicinity and no suitable habitat exists within the Program area for any of these species. Therefore, the IVIC Program will not affect these species and no further discussion of these species is warranted.

Although not a state or federally listed as threatened or endangered species, BUOW are considered a state SSC and a federal Bird of Conservation Concern (BCC), and this species is protected by international treaty under the Migratory Bird Treaty Act of 1918 (MBTA) and by State law under the California FGC (FGC #3513 & #3503.5). Additionally, this species has previously been documented

in the CCBC component of the IVIC Program. Therefore, BUOW will be included in the discussion below.

3.2.1 Special Status Species

The proposed Project footprint consists entirely of existing roadways and man-made flood control channel (CCBC). The environmental conditions within the proposed Project footprint are not suitable to support any of the special status plant species documented in the IVIC Program vicinity, including the state and federally listed as endangered slender-horned spineflower or Santa Ana River woollystar. However, there is some suitable habitat within and/or adjacent the proposed Project footprint to support several special status wildlife species documented in the IVIC Program vicinity.

In addition to the discussion below, an analysis of the likelihood for occurrence of all CNDDDB sensitive species documented in the *San Bernardino South, Redlands, San Bernardino North, and Harrison Mountain* quads is provided in Appendix A. This analysis considers species' range as well as documentation within the vicinity of the IVIC Program area and includes the habitat requirements for each species and the potential for their occurrence on site, based on required habitat elements and range relative to the current site conditions.

Swainson's Hawk – Threatened (State)

The state listed as threatened Swainson's hawk (SWHA) is a medium-sized raptor with relatively long, pointed wings that curve up while in flight (CDFW [Swainson's Hawks in California] n.d.). This species is a long-distance, neotropical migrant, nesting in northwestern Canada, the western U.S., and Mexico, and wintering in the open pampas and agricultural areas of South America (Argentina, Uruguay, southern Brazil). SWHA rely on grasslands for foraging and have adapted to using agricultural fields as replacement for native grasslands (CDFW [Swainson's Hawks in California] n.d.). SWHA generally nest near water in or near riparian habitats, although they have been known to nest in small clusters of trees within a larger grassland (Polite 2006). Although the Central Valley and Great Basin areas of northern California currently support the largest breeding populations in California, small populations of SWHA have been documented in isolated desert areas of the western Mojave Desert, the greater Antelope Valley near Lancaster, and in the Owen's Valley, along the eastern edge of the Sierra Nevada. SWHA populations have declined dramatically in California since the early 1900s, from a historic population estimate of as many as 17,136 breeding pairs, down to an estimated 375 pairs in 1979 and more recently (2005), as many 2,081 pairs (CDFW [Swainson's Hawks in California] n.d.). Threats resulting in SWHA population declines include loss and/or degradation of nesting, foraging and wintering habitats, pesticide poisoning and shooting during migration or on their wintering grounds (Bloom 1980).

Findings: The only SWHA occurrence documented in the 4-quad CNDDDB query is a historic occurrence from sometime between 1880 and 1920 recorded from the vicinity of San Bernardino (CNDDDB 2024). Migratory SWHA have been observed near the SBIA and there is some suitable roosting and foraging habitat adjacent portions of the proposed Project footprint (pers. obs.). However, the IVIC Program area is outside the current known breeding range for this species and there is no suitable SWHA breeding habitat within the Program area. Therefore, implementation of the IVIC Program will not affect Swainson's hawk.

San Bernardino Kangaroo Rat – Endangered (Federal/State)

The state and federally listed as endangered San Bernardino kangaroo rat (SBKR) is one of three recognized subspecies of Merriam's kangaroo rat (*D. merriami*) in California. The Merriam's kangaroo

rat is a small, burrowing rodent species that can be found within inland valleys and deserts of southwest United States of America and northern Mexico. The Dulzura kangaroo rat (*Dipodomys simulans*), the Pacific kangaroo rat (*Dipodomys agilis*) and the Stephens kangaroo rat (*Dipodomys stephensi*) occur in areas occupied by SBKR, but these other species have a wider habitat range. SBKR, however, has a restricted southern California distribution, confined to certain inland valley scrub communities and, more particularly, to scrub communities occurring along rivers, streams, and drainages within the San Bernardino, Menifee, and San Jacinto valleys. Most of these drainages have been historically altered due to a variety of reasons including, mining, off-road vehicle use, road and housing development, and flood control efforts. This increased use of river floodplain resources resulted in a reduction in both the amount and quality of habitat available for SBKR.

The areas which SBKR occupy are subjected to periodic flooding and hence, the dominant vegetation type (alluvial fan sage scrub) is described in general terms as having three successional phases: pioneer, intermediate, and mature as determined by elevation and distance from the main channel and time since previous flooding (Hanes et al. 1989, p. 187, as cited in USFWS 2009). Vegetation cover generally increases with distance from the active stream channel. The pioneer phase is subject to frequent flood disturbance (Smith 1980, p. 133; Hanes et al. 1989, p. 187, as cited in USFWS 2009). The intermediate phase, defined as the area between the active channel and mature terraces, is subject to periodic flooding at longer intervals. The vegetation on intermediate terraces is relatively open. As alluvial fan scrub vegetation ages in the absence of flooding, the suitability of this habitat for the SBKR declines (McKernan 1997, p. 58, as cited in USFWS 2009).

The USFWS listed SBKR as endangered on September 24, 1998 and set aside 33,295 acres of critical habitat for the SBKR in 2002. The USFWS then revised that decision in 2008 after a lawsuit and cut the designation down to 7,779 acres in Riverside and San Bernardino counties. On January 10, 2011, a federal court struck down the 2008 designation. The ruling concluded that the USFWS improperly relied on “core habitat” to define critical habitat for the SBKR rather than specifying the physical and biological features essential for the kangaroo rat’s conservation, as the law requires. The ruling reinstated the 2002 designation. The 2002 critical habitat rule for SBKR defined four Primary Constituent Elements (PCEs) that are essential to the conservation of SBKR. These PCEs are as follows:

1. Soil series consisting predominantly of sand, loamy sand, sandy loam, or loam;
2. Alluvial sage scrub and associated vegetation, such as coastal sage scrub and chamise chaparral, with a moderately open canopy;
3. River, creek, stream, and wash channels; alluvial fans; floodplains; floodplain benches and terraces; and historic braided channels that are subject to dynamic geomorphological and hydrological processes typical of fluvial systems within the historical range of the SBKR; and
4. Upland areas proximal to floodplains with suitable habitat.

Findings: According to the CNDDDB and USFWS threatened and endangered species occurrence GIS overlay, there are numerous SBKR occurrences documented adjacent the easternmost portion of 5th Street (between Church Avenue and SR-210), within and along City Creek. The most recent of these occurrences are from 2022. Therefore, SBKR are presumably present adjacent 5th Street, between Church Avenue and SR-210. No habitat suitable to support SBKR occurs elsewhere within or adjacent the proposed Project footprint and the IVIC Program will not result in any direct “take” of this species. However, it may be necessary to implement specific avoidance measures during the construction of any Project components located between Church Avenue and SR-210, to ensure the Program does not

affect SBKR. Recommended SBKR avoidance measures are included in Section 4.1.1 of this document.

Coastal California Gnatcatcher – Threatened (Federal)

The federally listed as threatened coastal California gnatcatcher (CAGN) is a resident (non-migratory) small songbird (passerine) which typically nests and forages in coastal sage scrub vegetation in southern California year-round. CAGN occur in dynamic and successional sage scrub habitats and non-sage scrub habitats such as chaparral, grassland, riparian areas, in proximity to sage scrub habitats. This species often nests in California sagebrush (USFWS 2010).

CAGN was federally listed as threatened in 1993 and critical habitat for this species was designated by the USFWS in 2000 and revised in 2007. The project area is not within USFWS designated critical habitat for this species. The PCEs identified by the USFWS for CAGN consist of the following:

1. Dynamic and successional sage scrub habitats: Venturan coastal sage scrub, Diegan coastal sage scrub, Riversidean sage scrub, Riversidean alluvial fan sage scrub, maritime succulent scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub in Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties that provide space for individual and population growth, normal behavior, breeding, reproduction, nesting, dispersal and foraging; and
2. Non-sage scrub habitats such as chaparral, grassland, riparian areas, in proximity to sage scrub habitats as described for PCE 1 above that provide space for dispersal, foraging, and nesting.

Findings: According to the CNDDDB, the nearest documented CAGN occurrence (1995) is approximately 1.8 miles southeast of the IVIC Program area. There is suitable RAFSS habitat (PCE 1) and riparian scrub habitat (PCE 2) for this species adjacent the easternmost portion of 5th Street (between Church Avenue and SR-210), within and along City Creek. Thus, there is a moderate potential for CAGN to occur adjacent 5th Street, between Church Avenue and SR-210, and protocol CAGN presence/absence surveys should be conducted prior to implementation of any Project components located between Church Avenue and SR-210, to determine whether the IVIC Program is likely to affect this species. No habitat suitable to support CAGN occurs elsewhere within or adjacent the proposed Project footprint.

Least Bell's Vireo – Endangered (Federal/State)

The least Bell's vireo (LBVI) is a state and federally listed endangered migratory bird species. This species is a small, olive-gray migratory songbird that nests and forages almost exclusively in riparian habitats. LBVI nesting habitat typically consists of well-developed overstory, understory, and low densities of aquatic and herbaceous cover. The understory frequently contains dense sub-shrub or shrub thickets. These thickets are often dominated by plants such as narrow-leaf willow, mulefat, young individuals of other willow species such as arroyo willow or black willow, and one or more herbaceous species. LBVI generally begin to arrive from their wintering range in southern Baja California and establish breeding territories by mid-March to late-March.

LBVI was first proposed for listing as endangered by the USFWS on May 3, 1985, (50 FR 18968 18975) and was subsequently listed as federally endangered on May 2, 1986 (51 FR 16474 16482). Critical habitat units were designated by the USFWS on February 2, 1994 (59 FR 4845) and included reaches of ten streams in six counties in southern California and the surrounding approximately 38,000 acres. The project area is not within USFWS designated critical habitat for this species.

Findings: According to the CNDDDB, the nearest documented LBVI occurrence (2016) is approximately 1.6 miles northeast (upstream) of the IVIC Program area, within City Creek. There is suitable riparian scrub habitat (mulefat thicket) for this species adjacent the easternmost portion of 5th Street (between Church Avenue and SR-210), within City Creek. Thus, there is a moderate potential for LBVI to occur adjacent 5th Street, between Church Avenue and SR-210, and protocol LBVI presence/absence surveys should be conducted prior to implementation of any Project components located between Church Avenue and SR-210, to determine whether the IVIC Program is likely to affect this species. No habitat suitable to support LBVI occurs elsewhere within or adjacent the proposed Project footprint.

Burrowing Owl – Federal BCC/California SSC

The BUOW is a ground dwelling owl typically found in arid prairies, fields, and open areas where vegetation is sparse and low to the ground. The BUOW is heavily dependent upon the presence of mammal burrows, with ground squirrel burrows being a common choice, in its habitat to provide shelter from predators, inclement weather and to provide a nesting place (Coulombe 1971). They are also known to make use of human-created structures, such as cement culverts and pipes, for burrows. According to the definition provided in the *2012 CDFG Staff Report on Burrowing Owl Mitigation*, “Burrowing owl habitat generally includes, but is not limited to, short or sparse vegetation (at least at some time of year), presence of burrows, burrow surrogates or presence of fossorial mammal dens, well-drained soils, and abundant and available prey.” BUOW spend a great deal of time standing on dirt mounds at the entrance to a burrow or perched on a fence post or other low to the ground perch from which they hunt for prey. They feed primarily on insects such as grasshoppers, June beetles and moths, but will also take small rodents, birds, and reptiles. They are active during the day and night but are considered a crepuscular owl; generally observed in the early morning hours or at twilight. The breeding season for BUOW is February 1 through August 31.

BUOW have disappeared from significant portions of their range in the last 15 years and, overall, nearly 60 percent of the breeding groups of owls known to have existed in California during the 1980s had disappeared by the early 1990s (Burrowing Owl Consortium 1993). The BUOW is not listed under the state or federal ESAs but is considered a state SSC and federal BCC. Additionally, the BUOW is a migratory bird protected by the international treaty under the MBTA and by State law under the California FGC (FGC #3513 & #3503.5).

Findings: According to the CNDDDB and personal observations, BUOW have been documented in the CCBC since 2007 and as recent as 2021. The BUOW habitat assessment survey was structured, in part, to detect BUOW. The survey consisted of walking transects spaced approximately 10 meters (30 feet) apart to provide 100 percent visual coverage of the ground surface within the survey area, which included all adjacent undeveloped areas within the 500-foot survey buffer (wherever accessible) and the entire CCBC. The result of the survey was that no evidence of BUOW was found in the survey area; however, CCBC and some adjacent areas remain suitable to support this species. Thus, there is still a high potential for BUOW to occur along the CCBC and protocol BUOW presence/absence surveys would be required to determine whether this species persists within the Program area.

3.2.2 Special Status Habitats

The IVIC Program area is partially within USFWS designated Critical Habitat for the federally listed as threatened Santa Ana sucker (*Catostomus santaanae*) and federally listed as endangered SBKR. These Critical Habitat units include the portion of the City Creek floodplain that is adjacent 5th Street,

between Church Avenue and SR-210. However, the entire proposed Project footprint is restricted to existing paved roadways and man-made flood control channel (CCBC). Therefore, the Project will not result in any loss or adverse modification of USFWS designated Critical Habitat, or any other special status habitats.

3.3 Aquatic Resources Delineation

The IVIC Program area is within the Bunker Hill Hydrologic Sub-Area (HSA 801.52). The Bunker Hill HSA comprises a 124,791-acre drainage area, within the larger Santa Ana Watershed (HUC 18070203). This watershed is primarily within San Bernardino County and includes portions of Riverside and Orange Counties with a small portion of Los Angeles County. The Santa Ana Watershed is bound on the north by the Mojave and Southern Mojave Watersheds, on the southeast by the Whitewater River and San Jacinto Watersheds, and on the west by the San Gabriel, Seal Beach, Newport Bay, and Aliso-San Onofre Watersheds. The Santa Ana Watershed encompasses a portion of the San Gabriel and San Bernardino Mountains in the north and is approximately 3,000 square miles in area. The Santa Ana River is the major hydrogeomorphic feature within the Santa Ana Watershed. One of several tributaries to the Santa Ana River is City Creek, which flows north to south through the easternmost end of the Program area.

3.3.1 Waters of the U.S.

The USACE has authority to permit the discharge of dredged or fill material in WOTUS under Section 404 of the CWA. The Environmental Protection Agency (EPA) and USACE currently define WOTUS as:

1. Waters used either currently, previously, or susceptible to future use in interstate or foreign commerce, the territorial seas, and interstate waters.
2. Impoundments of waters otherwise defined as WOTUS, except for impoundments of those WOTUS that are identified in 5 (below).
3. Relatively permanent, standing, or continuously flowing tributaries to the WOTUS described in 1 and 2 (above).
4. Wetlands that are adjacent to waters described in 1 (above), or relatively permanent, standing or continuously flowing bodies of water identified in 2 or 3 (above) that have a continuous surface connection with those waters.
5. Intrastate lakes and ponds not identified in 1 through 4 (above) that are relatively permanent, standing, or continuously flowing bodies of water with a continuous surface connection to the waters identified in 1 or 3 (above).

Findings: The IVIC Program area is intersected by City Creek, between Church Avenue and SR-210, and includes the CCBC. No Project component will impact City Creek; however, the CCBC will be improved between Victoria Avenue and its confluence with East Twin Creek (Figures 4a-4b; Pages 21-22). The CCBC is a man-made ephemeral flood control channel that receives surface flows for only brief durations and in direct response to precipitation.



Figure 4a. Jurisdictional Aquatic Resources Delineation – Victoria Avenue to Sterling Avenue

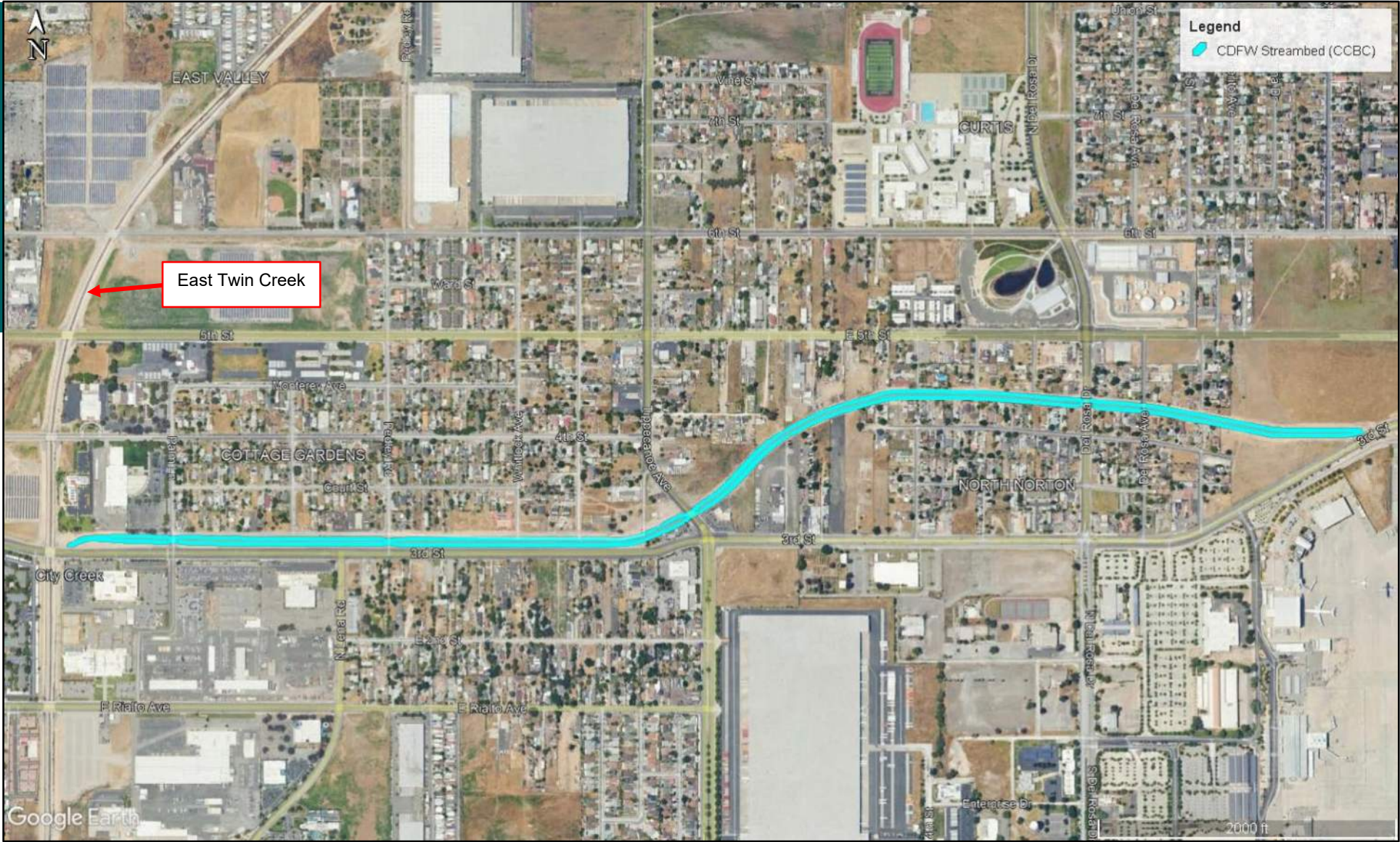


Figure 4b. Jurisdictional Aquatic Resources Delineation – Sterling Avenue to East Twin Creek/CCBC Confluence

There are no wetland or non-wetland WOTUS present within the proposed Project footprint. There is not a continuous surface water connection between CCBC and any potential downstream receiving waters, including East Twin Creek, which is another tributary to the Santa Ana River. Given that the CCBC does not have a continuous surface water connection to any WOTUS it was determined that no aquatic resources subject to regulation by the USACE or RWQCB under Sections 404/401 of the CWA occur within the proposed Project footprint.

3.3.2 Waters of the State

Under Sections 1600 through 1607 of the California FGC, the CDFW has jurisdiction over lakes, rivers, streams, or other aquatic resources, stream-dependent wildlife resources, and riparian habitats. This jurisdiction can include, but is not limited to intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, USGS blue-line streams, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance that support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG 1994).

Findings: The CCBC (Figures 4a-4b; Pages 21-22) is subject to regulation by the CDFW under Section 1602 of the FGC, as well as by the RWQCB under the Porter Cologne Water Quality Control Act. Although this man-made flood control feature consists mostly of unvegetated gravelly sand and cobble river wash, it has an identifiable bed and bank, which defines the maximal extent of this feature. Therefore, the CCBC would fall under CDFW and RWQCB jurisdiction.

4 Conclusions and Recommendations

4.1 Sensitive Biological Resources

A reconnaissance level BRA survey of the IVIC Program area was conducted by HDR in April and May of 2024 to identify potential habitat for special status species within the Program area. No special status species were observed within the Program area during the reconnaissance-level field survey. The proposed Project footprint is completely disturbed and no longer supports any native habitats (see attached Site Photos). The proposed Project footprint consists of existing paved roadways and a man-made flood control channel (CCBC), and the environmental conditions within the proposed Project footprint are not suitable to support any of the special status plant species documented in the IVIC Program vicinity, including the state and federally listed as endangered slender-horned spineflower or Santa Ana River woollystar. Therefore, the IVIC Program will not affect any listed plant species. Furthermore, the Program will not affect any special status habitats, including any USFWS designated Critical Habitat for any federally listed species, and the Project will not result in any loss or adverse modification of Critical Habitat. However, there is some RAFSS and riparian scrub (mulefat thicket) habitat adjacent the easternmost portion of 5th Street (between Church Avenue and SR-210), within and along City Creek that is suitable for the federally listed as threatened CAGN and the state and federally listed as endangered LBVI, respectively. Additionally, the state and federally listed as endangered SBKR has been documented numerous times adjacent 5th Street, between Church Avenue and SR-210, and this portion of the City Creek floodplain is within USFWS designated Critical Habitat for this species. Finally, BUOW have been documented occurring in CCBC, between Victoria Avenue and Sterling Avenue.

4.1.1 Special Status Species

San Bernardino Kangaroo Rat

The proposed Project footprint is entirely within existing paved roadways and CCBC, which does not contain any habitat suitable to support SBKR, and the IVIC Program will not result in any direct “take” of this species. However, construction activities within 5th Street, between Church Avenue and SR-210, could potentially result in indirect effects on SBKR. Therefore, the following precautionary measures are recommended to avoid any potential Project related effects on SBKR:

- All construction activities between Church Avenue and SR-210 should be restricted to existing roadways and should take place during daytime hours to avoid any light or noise disturbance that could potentially alter the nocturnal behavior of SBKR present in adjacent habitat within and along City Creek.
- Avoid installing permanent lighting between Church Avenue and SR-210 if possible. If permanent lighting must be installed between Church Avenue and SR-210 as part of the IVIC Program circulation system infrastructure improvements, low intensity lighting that is directed away from adjacent areas should be utilized to protect SBKR and other nocturnal species from direct night lighting. Shielding should be incorporated in Project designs to ensure ambient lighting in adjacent areas is not increased.

Coastal California Gnatcatcher

There is suitable RAFSS and nearby riparian scrub (mulefat thicket) habitat for CAGN adjacent the easternmost portion of 5th Street (between Church Avenue and SR-210), within and along City Creek,

and this species has been documented within 1.8 miles of the proposed Project footprint. However, it is not currently known whether CAGN occur in the IVIC Program area. Therefore, it is recommended that protocol CAGN presence/absence surveys be conducted prior to implementation of any Project components located between Church Avenue and SR-210, to determine whether the Program is likely to affect this species.

Least Bell's Vireo

There is suitable riparian scrub (mulefat thicket) habitat for LBVI adjacent the easternmost portion of 5th Street (between Church Avenue and SR-210), within City Creek, and this species has been documented within 1.6 miles of the proposed Project footprint. However, it is not currently known whether LBVI occur in the IVIC Program area. Therefore, it is recommended that protocol LBVI presence/absence surveys be conducted prior to implementation of any Project components located between Church Avenue and SR-210, to determine whether the Program is likely to affect this species. Alternatively, all construction activities between Church Avenue and SR-210 can be conducted outside of the LBVI breeding season (typically mid-March to late September), when this species is absent from the region.

Burrowing Owl

BUOW have been documented occurring in the CCBC portion of the IVIC Program area, between Victoria Avenue and Sterling Avenue. Therefore, a BUOW habitat suitability assessment of the Program area was conducted by HDR in April and May of 2024 that included 100 percent visual coverage of all adjacent undeveloped areas within the 500-foot survey buffer (wherever accessible) and the entire CCBC. The result of the survey was that no evidence of BUOW was found in the survey area; however, CCBC and some adjacent areas remain suitable to support this species. Therefore, protocol BUOW presence/absence surveys are required to determine whether this species persists within the Program area. If BUOW are determined to be present within the Program area following protocol presence/absence surveys, then coordination with the CDFW would be required prior to implementation of any Project components that may affect this species.

The BUOW is a state SSC and federal BCC and is protected under the MBTA and by state law under the California FGC (FGC #3513 & #3503.5). In general, impacts to BUOW can be avoided by conducting work outside of their nesting season (peak BUOW breeding season is identified as April 15th to August 15th). However, if all work cannot be conducted outside of nesting season, a project specific BUOW protection and/or passive relocation plan can be prepared to determine suitable buffers and/or artificial burrow construction locations. Regardless of survey results and conclusions given herein, BUOW are protected by applicable state and federal laws. As such, if a BUOW is found on-site at the time of construction, all activities likely to affect the animal(s) should cease immediately and regulatory agencies should be contacted to determine appropriate management actions. Importantly, nothing given in this report is intended to authorize any form of disturbance to BUOW. Such authorization must come from the appropriate regulatory agencies, including CDFW and/or USFWS.

4.1.2 Nesting Birds

There is potentially suitable nesting habitat within the IVIC Program area for several avian species including ground nesting species like killdeer (*Charadrius vociferus*) and several special status species including BUOW, CAGN, and LBVI. Most native bird species are protected from unlawful take by the MBTA (Appendix E). Additionally, the State of California provides protection for native bird species and their nests in the FGC (Appendix E). In general, impacts to all bird species (common and special status) can be avoided by conducting work outside of the nesting season, which is generally February

1st through August 31st. However, if all work cannot be conducted outside of nesting season, the following precautionary measures are recommended to ensure MBTA and FGC compliance:

- Vegetation removal, including any tree removal or pruning, and structure demolition should be conducted outside the typical nesting season (i.e., between September 1st and January 31st).
- To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist should conduct preconstruction nesting bird surveys prior to Project related disturbance to suitable nesting areas to identify any active nests. The nesting bird surveys should consist of a minimum of five (5) consecutive survey days and should include an additional three (3) consecutive nights of survey for nocturnal species. Nocturnal surveys should be conducted between the hours of 9:00 p.m. and midnight, during appropriate weather conditions (e.g., no rain or winds).
- If no active nests are found, no further action would be required. If an active nest is found, the biologist should set appropriate no-work buffers around the nest which would be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity, and duration of disturbance. The nest(s) and buffer zones should be field checked weekly by a qualified biological monitor. The approved no-work buffer zone should be clearly marked in the field, within which no disturbance activity should commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

4.2 Jurisdictional Aquatic Resources

In addition to the BRA field survey, HDR also assessed the IVIC Program area for the presence of any state and/or federally jurisdictional aquatic resources. There are no wetland or non-wetland WOTUS present within the proposed Project footprint. Therefore, no CWA Sections 404/401 permitting through the USACE or RWQCB would be required. However, the CCBC is subject to regulation by the CDFW under Section 1602 of the FGC, as well as by the RWQCB under the Porter Cologne Water Quality Control Act (Figures 4a-4b; Pages 21-22). Therefore, potential impacts (permanent and/or temporary) to this man-made ephemeral flood control channel would require RWQCB issued Waste Discharge Requirements (WDRs) and a CDFW issued Lake or Streambed Alteration (LSA) Agreement.

A FGC Section 1602 Lake LSA Agreement is required for all activities that alter streams and lakes and their associated riparian/riverine habitat. The stormwater drainage system improvements component of the IVIC Program would install a new channel design (two alternatives) within the existing CCBC between Victoria Avenue (just north of the SBIA and south of 3rd Street) and the East Twin Creek Channel to provide sufficient capacity to convey future 100-year flood flows. This Project component would potentially result in approximately 14,500 linear feet and 15.11 acres of impacts to man-made ephemeral flood control channel (CCBC) installed over a 20-year period. Prior to implementation of any stormwater drainage system improvements within CCBC, a formal jurisdictional delineation should be conducted by a qualified delineation specialist to determine the extent of any potential Project related impacts to this feature and the appropriate regulatory permitting required. In addition to the formal application materials and fee (based on cost of the Project), a copy of the appropriate CEQA documentation must be included with the application.

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Appendix A. CNDDB Species and Habitats
Documented Within the *San Bernardino South*,
Redlands, *San Bernardino North*, and *Harrison*
Mountain USGS 7.5-Minute Quadrangles

Special Status Species Occurrence Potential in the Program Area

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Accipiter cooperii</i>	Cooper's hawk	None/ None	G5; S4; CDFW: WL	Woodland, chiefly of open, interrupted, or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks.	There is no suitable nesting habitat for this species in the Program area. Occurrence potential is low .
<i>Agelaius tricolor</i>	tricolored blackbird	None/ Threatened	G1G2; S2; CDFW: SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	None/ None	G5T3; S4; CDFW: WL	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Allium howellii</i> var. <i>clokeyi</i>	Mt. Pinos onion	None/ None	G4T2; S2; CNPS: 1B.3	Great Basin scrub, pinyon and juniper woodland, meadows, and seeps (edges). 1385-1800 m.	The Program area is outside the know elevation range for this species. Occurrence potential is low .
<i>Anniella stebbinsi</i>	Southern California legless lizard	None/ None	G3; S3; CDFW: SSC	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally, in moist, loose soil. They prefer soils with a high moisture content.	There is suitable habitat for this species adjacent 5 th Street between Church Street and SR-210, along City Creek. Occurrence potential is moderate adjacent 5 th Street between Church Street and SR-210.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Antrozous pallidus</i>	pallid bat	None/ None	G4; S3; CDFW: SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	There are no suitable roosting sites for this species in the Program area. Occurrence potential is low .
<i>Arenaria paludicola</i>	marsh sandwort	Endangered/ Endangered	G1; S1; CNPS: 1B.1	Marshes and swamps. Growing up through dense mats of <i>Typha</i> , <i>Juncus</i> , <i>Scirpus</i> , etc. in freshwater marsh. Sandy soil. 3-170 m.	The Program area is outside the know elevation range for this species. Occurrence potential is low .
<i>Arizona elegans occidentalis</i>	California glossy snake	None/ None	G5T2; S2; CDFW: SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	There is suitable habitat for this species adjacent 5 th Street between Church Street and SR-210, along City Creek. Occurrence potential is moderate adjacent 5 th Street between Church Street and SR-210.
<i>Artemisiospiza belli belli</i>	Bell's sparrow	None/ None	G5T2T3; S3; CDFW: WL	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Aspidoscelis hyperythra</i>	orange-throated whiptail	None/ None	G5; S2S3; CDFW: WL	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food: termites.	There is suitable habitat for this species adjacent 5 th Street between Church Street and SR-210, along City Creek, but the nearest documented occurrence for this species (2016) is approx. 5.7 miles SW of the 5 th Street bridge. Occurrence potential is low .

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Aspidoscelis tigris stejnegeri</i>	coastal whiptail	None/ None	G5T5; S3; CDFW: SSC	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky.	There is suitable habitat for this species adjacent 5 th Street between Church Street and SR-210, along City Creek. Occurrence potential is moderate adjacent 5 th Street between Church Street and SR-210.
<i>Astragalus hornii</i> var. <i>hornii</i>	Horn's milk-vetch	None/ None	GUT1; S1; CNPS: 1B.1	Meadows and seeps, playas. Lake margins, alkaline sites. 75-350 m.	The habitats this species is typically associated with are absent from the Program area. Occurrence potential is low .
<i>Athene cunicularia</i>	burrowing owl	None/ None	G4; S2; CDFW: SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	There is suitable habitat for this species in the Program Area and this species has been documented along the City Creek Bypass Channel as recent as November of 2021. Occurrence potential is high .
<i>Batrachoseps gabrieli</i>	San Gabriel slender salamander	None/ None	G2G3; S2S3	Known only from the San Gabriel Mtns. Found under rocks, wood, and fern fronds, and on soil at the base of talus slopes. Most active on the surface in winter and early spring.	The montane habitats this species occurs in are absent from the Program Area. Occurrence potential is low .

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Berberis nevinii</i>	Nevin's barberry	Endangered/ Endangered	G1; S1; CNPS: 1B.1	Chaparral, cismontane woodland, coastal scrub, riparian scrub. On steep, N-facing slopes or in low grade sandy washes. 90-1590 m.	Some of the habitats this species is associated with are present adjacent 5 th Street between Church Street and SR-210, along City Creek. However, the nearest documented occurrence for this species (1990s) is approx. 5.6 miles SW of the 5 th Street bridge. Occurrence potential is low adjacent 5 th Street between Church Street and SR-210. However, this species is absent from the proposed Program footprint.
<i>Bombus crotchii</i>	Crotch's bumble bee	None/ Candidate Endangered	G2; S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	The host plants for this species are present in the Program Area. Occurrence potential is moderate .
<i>Bombus morrisoni</i>	Morrison bumble bee	None/ None	G3; S1S2	From the Sierra-Cascade ranges eastward across the intermountain west. Food plant genera include <i>Cirsium</i> , <i>Cleome</i> , <i>Helianthus</i> , <i>Lupinus</i> , <i>Chrysothamnus</i> , and <i>Melilotus</i> .	The montane habitats this species occurs in are absent from the Program Area. Occurrence potential is low .
<i>Bombus pensylvanicus</i>	American bumble bee	None/ None	G3G4; S2	Long tongued; forages on a wide variety of flowers including vetches (<i>Vicia</i>), clovers (<i>Trifolium</i>), thistles (<i>Cirsium</i>), sunflowers (<i>Helianthus</i>), etc. Nests above ground under long grass or underground. Queens overwinter in rotten wood or underground.	The host plants for this species are present in the Program Area. Occurrence potential is moderate .

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	Threatened/ Endangered	G2; S2; CNPS: 1B.1	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Usually associated with annual grassland and vernal pools; often surrounded by shrubland habitats. Occurs in openings on clay soils. 15-1030 m.	The microhabitats this species is typically associated with are absent from the Program area. Occurrence potential is low .
<i>Buteo swainsoni</i>	Swainson's hawk	None/ Threatened	G5; S4	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	The Program Area is outside the current breeding range of this species. However, there is some suitable non-breeding season foraging habitat for this species in the program area, and this species has been observed adjacent 3 rd Street at the San Bernardino International Airport. Occurrence potential is moderate .
<i>Calochortus palmeri</i> var. <i>palmeri</i>	Palmer's mariposa- lily	None/ None	G3T2; S2; CNPS: 1B.2	Meadows and seeps, chaparral, lower montane coniferous forest. Vernal moist places in yellow-pine forest, chaparral. 195-2530 m.	The habitats this species is typically associated with are absent from the Program area. Occurrence potential is low .
<i>Calochortus plummerae</i>	Plummer's mariposa-lily	None/ None	G4; S4; CNPS: 4.2	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest. Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 60-2500 m.	Some of the habitats this species is associated with are present adjacent 5 th Street between Church Street and SR-210, along City Creek, but the nearest documented occurrence for this species (1997) is approx. 2.6 miles E of the 5 th Street bridge. Occurrence potential is low-moderate adjacent 5th Street between Church Street and SR-210.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Carex comosa</i>	bristly sedge	None/ None	G5; S2; CNPS: 2B.1	Marshes and swamps, coastal prairie, valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta island. -5-1010 m.	Only one historic occurrence (1884) documented in the 4-quad CNDDDB query and the habitats this species is typically associated with are absent from the Program area. Occurrence potential is low .
<i>Castilleja lasiorhyncha</i>	San Bernardino Mountains owl's-clover	None/ None	G2?; S2?; CNPS: 1B.2	Meadows and seeps, pebble plain, upper montane coniferous forest, chaparral, riparian woodland. Mesic to drying soils in open areas of stream and meadow margins or in vernal wet areas. 1140-2320 m.	The Program area is outside the known elevation range for this species. Occurrence potential is low .
<i>Catostomus santaanae</i>	Santa Ana sucker	Threatened/ None	G1; S1; CDFW: SSC	Endemic to Los Angeles Basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae.	The aquatic habitats required by this species do not exist in the Program area. Therefore, this species is considered absent from the Program area.
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	None/ None	G3G4T2; S2; CNPS: 1B.1	Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland. Alkali meadow, alkali scrub; also, in disturbed places. 5-1170 m.	Some of the habitats this species is associated with are present adjacent 5 th Street between Church Street and SR-210, along City Creek, and this species has been documented (1992) approx. 2 miles N (upstream) of the 5 th Street bridge in City Creek. Occurrence potential is moderate adjacent 5 th Street between Church Street and SR-210.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	None/ None	G5T3T4; S3S4	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego, Riverside, San Bernardino, and Los Angeles Counties, inclusive of Orange County. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	There is suitable habitat for this species adjacent 5 th Street between Church Street and SR-210, along City Creek, and this species has been documented (2002) in this area. Occurrence potential is high adjacent 5 th Street between Church Street and SR-210.
<i>Charina umbratica</i>	southern rubber boa	None/ Threatened	G2G3; S2	Found in a variety of montane forest habitats. Previously considered morphologically intermediate, recent (2022) genomic analysis clarifies individuals from Mt Pinos, Tehachapi Mts, and southern Sierra Nevada are southern rubber boa. Found in vicinity of streams or wet meadows; requires loose, moist soil for burrowing; seeks cover in rotting logs, rock outcrops, and under surface litter.	The montane habitats this species occurs in are absent from the Program Area. Occurrence potential is low .
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	salt marsh bird's-beak	Endangered/ Endangered	G4?T1; S1; CNPS: 1B.2	Marshes and swamps, coastal dunes. Limited to the higher zones of salt marsh habitat. 0-10 m.	The Program area is outside the known elevation range for this species. Occurrence potential is low .
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	None/ None	G3T2; S2; CNPS: 1B.1	Coastal scrub, chaparral, cismontane woodland, valley, and foothill grassland. Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chaparral and oak woodland. Dry, sandy soils. 90-1220 m.	Some of the habitats this species is associated with are present adjacent 5 th Street between Church Street and SR-210, along City Creek. However, the nearest documented occurrence for this species (1991) is approx. 2 miles SE of the 5 th Street bridge. Occurrence potential is low-moderate adjacent 5 th Street between Church Street and SR-210.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	Threatened/ Endangered	G5T2T3; S1	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Coleonyx variegatus abbotti</i>	San Diego banded gecko	None/ None	G5T5; S1S2; CDFW: SSC	Coastal and cismontane Southern California. Found in granite or rocky outcrops in coastal scrub and chaparral habitats.	There is some suitable habitat for this species adjacent 5 th Street between Church Street and SR-210, along City Creek, but the only occurrence for this species documented in the 4-quad CNDDDB query is approx. 10 miles SW of the 5 th Street bridge. Occurrence potential is low .
<i>Crotalus ruber</i>	red-diamond rattlesnake	None/ None	G4; S3; CDFW: SSC	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	There is some suitable habitat for this species adjacent 5 th Street between Church Street and SR-210, along City Creek. Occurrence potential is moderate adjacent 5 th Street between Church Street and SR-210.
<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	Peruvian dodder	None/ None	G5T4?; SH; CNPS: 2B.2	Marshes and swamps (freshwater). Freshwater marsh. 15-280 m.	Only one historic occurrence (1890) documented in the 4-quad CNDDDB query and the habitats this species is typically associated with are absent from the Program area. Occurrence potential is low .
<i>Diadophis punctatus modestus</i>	San Bernardino ringneck snake	None/ None	G5T2T3; S2?	Most common in open, relatively rocky areas. Often in somewhat moist microhabitats near intermittent streams. Avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous veg.	There is some suitable habitat for this species adjacent 5 th Street between Church Street and SR-210, along City Creek. Occurrence potential is moderate adjacent 5 th Street between Church Street and SR-210.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Dipodomys merriami parvus</i>	San Bernardino kangaroo rat	Endangered/ Endangered	G5T1; S1; CDFW: SSC	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.	There is suitable habitat for this species adjacent 5 th Street between Church Street and SR-210, along City Creek, and this species has been documented numerous times in this area including as recent as 2022. Therefore, this species is presumably present adjacent 5 th Street between Church Street and SR-210.
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	Threatened/ Threatened	G2; S3	Primarily annual and perennial grasslands, but also occurs in coastal scrub and sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass and filaree. Will burrow into firm soil.	The Program area is outside the known range of this species. Occurrence potential is low .
<i>Dodecahema leptoceras</i>	slender-horned spineflower	Endangered/ Endangered	G1; S1; CNPS: 1B.1	Chaparral, cismontane woodland, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes; associates include <i>Encelia</i> , <i>Dalea</i> , <i>Lepidospartum</i> , etc. Sandy soils. 200-765 m.	Some of the habitats this species is associated with are present adjacent 5 th Street between Church Street and SR-210, along City Creek. However, the nearest documented occurrence for this species (2021) is approx. 1.1 miles SE of the 5 th Street bridge. Occurrence potential is low-moderate adjacent 5 th Street between Church Street and SR-210. However, this species is absent from the proposed Program footprint.
<i>Empidonax traillii eximius</i>	southwestern willow flycatcher	Endangered/ Endangered	G5T2; S3	Riparian woodlands in Southern California.	There is no suitable habitat for this species in the Program area. Occurrence potential is low .

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Eremophila alpestris actia</i>	California horned lark	None/ None	G5T4Q; S4; CDFW: WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also, main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	There is some suitable habitat for this species in the Program area. Occurrence potential is moderate .
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Santa Ana River woollystar	Endangered/ Endangered	G4T1; S1; CNPS: 1B.1	Coastal scrub, chaparral. In sandy soils on river floodplains or terraced fluvial deposits. 180-705 m.	The habitats this species is associated with are present adjacent 5 th Street between Church Street and SR-210, along City Creek, and this species has been documented within City Creek up- and downstream of the Program Area. Occurrence potential is high adjacent 5 th Street between Church Street and SR-210. However, this species is absent from the proposed Program footprint.
<i>Euchloe hyantis andrewsi</i>	Andrew's marble butterfly	None/ None	G3G4T2; S2	Inhabits yellow pine forest near Lake Arrowhead and Big Bear Lake, San Bernardino Mtns, San Bernardino Co, 5000-6000 ft. Hostplants are <i>Streptanthus bernardinus</i> and <i>Arabis holboellii</i> var <i>pinetorum</i> ; larval foodplant is <i>Descurainia richardsonii</i> .	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Eugnosta busckana</i>	Busck's gallmoth	None/ None	G1G3; S2S3	Coastal southern California. Tiny micro-moth (1 cm) with larva forming galls on host plant <i>Encelia californica</i> (California brittlebush). Adult flight period is during winter, generally from November to February, and have been reported at UV lights and porch lights.	The host plant for this species is present adjacent 5 th Street between Church Street and SR-210, along City Creek. Occurrence potential is moderate adjacent 5 th Street between Church Street and SR-210.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Eumops perotis californicus</i>	western mastiff bat	None/ None	G4G5T4; S3S4; CDFW: SSC	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	There is some suitable habitat for this species in the Program area. Occurrence potential is moderate .
<i>Euphydryas editha quino</i>	quino checkerspot butterfly	Endangered/ None	G4G5T1T2; S1S2	Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego counties. Hills and mesas near the coast. Need high densities of food plants <i>Plantago erecta</i> , <i>P. insularis</i> , and <i>Orthocarpus purpurescens</i> .	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Falco columbarius</i>	merlin	None/ None	G5; S3S4; CDFW: WL	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms, and ranches. Clumps of trees or windbreaks are required for roosting in open country.	The Program Area is outside the breeding range of this species. However, there is suitable non-breeding season habitat for this species in the program area, and this species has been observed along 3 rd Street, between Victoria Avenue and Central Avenue. Occurrence potential is moderate .
<i>Fimbristylis thermalis</i>	hot springs fimbristylis	None/ None	G4; S1S2; CNPS: 2B.2	Meadows and seeps (alkaline). Near hot springs. 115-1585 m.	The habitats this species is associated with are absent from the Program area. Occurrence potential is low .
<i>Galium californicum ssp. primum</i>	Alvin Meadow bedstraw	None/ None	G5T2; S2; CNPS: 1B.2	Chaparral, lower montane coniferous forest. Grows in shade of trees and shrubs at the lower edge of the pine belt, in pine forest-chaparral ecotone. Granitic, sandy soils. 1460-1830 m.	The Program area is outside the know elevation range for this species. Occurrence potential is low .

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Gila orcuttii</i>	arroyo chub	None/ None	G2; S2; CDFW: SSC	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave and San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.	The aquatic habitats required by this species do not exist in the Program area. Therefore, this species is considered absent from the Program area.
<i>Glaucomys oregonensis californicus</i>	San Bernardino flying squirrel	None/ None	G5T1T2; S1S2; CDFW: SSC	Known from black oak or white fir dominated woodlands between 5200 - 8500 ft in the San Bernardino and San Jacinto ranges. May be extirpated from San Jacinto range. Needs cavities in trees/snags for nests and cover. Needs nearby water.	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Haliaeetus leucocephalus</i>	bald eagle	Delisted/ Endangered	G5; S3; CNPS: CDFW: FP	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Los Angeles sunflower	None/ None	G5TX; SX; CNPS: 1A	Marshes and swamps (coastal salt and freshwater). 35-1525 m.	Only one historic occurrence (1937) documented in the 4-quad CNDDDB query and the microhabitats this species is typically associated with are absent from the Program area. Occurrence potential is low .
<i>Heuchera parishii</i>	Parish's alumroot	None/ None	G3; S3; CNPS: 1B.3	Lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest, alpine boulder, and rock field. Rocky places. Sometimes on carbonate. 1340-3505 m.	The Program area is outside the know elevation range for this species. Occurrence potential is low .

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Horkelia cuneata</i> var. <i>puberula</i>	mesa horkelia	None/ None	G4T1; S1; CNPS: 1B.1	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 15-1645 m.	One historic occurrence (1888) documented in the 4-quad CNDDB query. Occurrence potential is low .
<i>Icteria virens</i>	yellow-breasted chat	None/ None	G5; S4; CDFW: SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Imperata brevifolia</i>	California satintail	None/ None	G3; S3; CNPS: 2B.1	Coastal scrub, chaparral, riparian scrub, Mojavean desert scrub, meadows, and seeps (alkali), riparian scrub. Mesic sites, alkali seeps, riparian areas. 3-1495 m.	One historic occurrence (1891) documented in the 4-quad CNDDB query. Occurrence potential is low .
<i>Ivesia argyrocoma</i> var. <i>argyrocoma</i>	silver-haired ivesia	None/ None	G2T2; S2; CNPS: 1B.2	Meadows and seeps, pebble plains, upper montane coniferous forest. In pebble plains and meadows with other rare plants. 1490-2960 m.	The Program area is outside the know elevation range for this species. Occurrence potential is low .
<i>Lanius ludovicianus</i>	loggerhead shrike	None/ None	G4; S4; CDFW: SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub, and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	There is some suitable habitat for this species adjacent 5 th Street between Church Street and SR- 210, along City Creek. Occurrence potential is moderate adjacent 5 th Street between Church Street and SR-210.
<i>Lasiurus xanthinus</i>	western yellow bat	None/ None	G4G5; S3; CDFW: SSC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	There is some suitable habitat for this species adjacent 5 th Street between Church Street and SR- 210, along City Creek. Occurrence potential is moderate adjacent 5 th Street between Church Street and SR-210.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Laterallus jamaicensis coturniculus</i>	California black rail	None/ Threatened	G3T1; S2; CDFW: FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	None/ None	G5T3; S3; CNPS: 4.3	Chaparral, coastal scrub. Dry soils, shrubland. 4-1435 m.	Three historic occurrences (1889, 1952, 1952) documented in the 4-quad CNDDB query. Occurrence potential is low .
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	None/ None	G5T3T4; S3S4	Intermediate canopy stages of shrub habitats and open shrub / herbaceous and tree / herbaceous edges. Coastal sage scrub habitats in Southern California.	There is some suitable habitat for this species adjacent 5 th Street between Church Street and SR-210, along City Creek. Occurrence potential is moderate adjacent 5 th Street between Church Street and SR-210.
<i>Lycium parishii</i>	Parish's desert-thorn	None/ None	G4; S1; CNPS: 2B.3	Coastal scrub, Sonoran desert scrub. -3-570 m.	One historic occurrence (1885) documented in the 4-quad CNDDB query. Occurrence potential is low .
<i>Malacothamnus parishii</i>	Parish's bush-mallow	None/ None	GXQ; SX; CNPS: 1A	Chaparral, coastal sage scrub. In a wash. 305-455 m.	One historic occurrence (1895) documented in the 4-quad CNDDB query. Occurrence potential is low .
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Hall's monardella	None/ None	G5T3; S3; CNPS: 1B.3	Broadleafed upland forest, chaparral, lower montane coniferous forest, cismontane woodland, valley, and foothill grassland. Dry slopes and ridges in openings. 700-1800 m.	The Program area is outside the know elevation range for this species. Occurrence potential is low .

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Monardella pringlei</i>	Pringle's monardella	None/ None	GX; SX; CNPS: 1A	Coastal scrub. Sandy hills. 300-400 m.	One historic occurrence (1941) documented in the 4-quad CNDDDB query. Occurrence potential is low .
<i>Nasturtium gambelii</i>	Gambel's water cress	Endangered/ Threatened	G1; S1; CNPS: 1B.1	Marshes and swamps. Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. 5-305 m.	One historic occurrence (1935) documented in the 4-quad CNDDDB query. Occurrence potential is low .
<i>Neolarra alba</i>	white cuckoo bee	None/ None	GH; SH	Known only from localities in Southern California. Cleptoparasitic in the nests of perdita bees.	Two historic occurrences (1913, 1946) documented in the 4-quad CNDDDB query. Occurrence potential is unknown .
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	None/ None	G5T3T4; S3S4; CDFW: SSC	Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	There is suitable habitat for this species adjacent 5 th Street between Church Street and SR-210, along City Creek, and this species has been documented (2002) in this area. Occurrence potential is high adjacent 5 th Street between Church Street and SR-210.
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat	None/ None	G5; S3; CDFW: SSC	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Oncorhynchus mykiss irideus</i> pop. 10	steelhead - southern California DPS	Endangered/ Candidate Endangered	G5T1Q; S1	Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.	The aquatic habitats required by this species do not exist in the Program area. Therefore, this species is considered absent from the Program area.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	None/ None	G5T3; S3; CDFW: SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. Feeds almost exclusively on arthropods, especially scorpions and orthopteran insects.	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Pelazoneuron puberulum</i> var. <i>sonorense</i>	Sonoran maiden fern	None/ None	G5T3; S2; CNPS: 2B.2	Meadows and seeps. Along streams, seepage areas. 60-930 m.	The Program Area does not support the type of stream/seep habitats this species is typically associated with and the only documented occurrence in the 4-quad CNDDb query (2009) is approx. 4.5 miles NW of the 5 th Street bridge. Occurrence potential is low .
<i>Perideridia parishii</i> ssp. <i>parishii</i>	Parish's yampah	None/ None	G4T3T4; S2; CNPS: 2B.2	Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest. Damp meadows or along streambeds- prefers an open pine canopy. 1470-2530 m.	The Program area is outside the know elevation range for this species. Occurrence potential is low .
<i>Perognathus alticola alticola</i>	white-eared pocket mouse	None/ None	G2TH; SH; CDFW: SSC	Ponderosa and Jeffrey pine habitats; also, in mixed chaparral and sagebrush habitats in the San Bernardino Mountains. Burrows are constructed in loose soil.	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	None/ None	G5T2; S1S2; CDFW: SSC	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Open ground with fine, sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.	There is suitable habitat for this species adjacent 5 th Street between Church Street and SR-210, along City Creek, and this species has been documented (2017) immediately adjacent the S side of the 5th Street/Church Street intersection. Occurrence potential is high adjacent 5 th Street between Church Street and SR-210.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Phrynosoma blainvillii</i>	coast horned lizard	None/ None	G4; S4; CDFW: SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	There is suitable habitat for this species adjacent 5 th Street between Church Street and SR-210, along City Creek. Occurrence potential is moderate adjacent 5 th Street between Church Street and SR-210.
<i>Poliophtila californica californica</i>	coastal California gnatcatcher	Threatened/ None	G4G5T3Q; S2; CDFW: SSC	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	Some potentially suitable habitat for this species exists adjacent 5 th Street between Church Street and SR-210, along City Creek, and CAGN have been documented (1995) approx. 1.7 miles SE of the 5 th Street bridge. Occurrence potential is moderate adjacent 5 th Street between Church Street and SR-210.
<i>Rana draytonii</i>	California red-legged frog	Threatened/ None	G2G3; S2S3; CDFW: SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	The aquatic habitats required by this species do not exist in the Program area. Therefore, this species is considered absent from the Program area.
<i>Rana muscosa</i>	southern mountain yellow-legged frog	Endangered/ Endangered	G1; S2; CDFW: WL	Disjunct populations known from southern Sierras (northern DPS) and San Gabriel, San Bernardino, and San Jacinto Mtns (southern DPS). Found at 1000 to 12000 ft in lakes and creeks that stem from springs and snowmelt. May overwinter under frozen lakes. Often encountered within a few feet of water. Tadpoles may require 2 - 4 yrs. to complete their aquatic development.	The aquatic habitats required by this species do not exist in the Program area. Therefore, this species is considered absent from the Program area.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Rhaphiomidas terminatus abdominalis</i>	Delhi Sands flower-loving fly	Endangered/ None	G1T1; S1	Found only in areas of the Delhi Sands formation in southwestern San Bernardino and northwestern Riverside counties. Requires fine, sandy soils, often with wholly or partly consolidated dunes and sparse vegetation. Oviposition req. shade.	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Rhinichthys osculus</i> ssp. 8	Santa Ana speckled dace	None/ None	G5T1; S1; CDFW: SSC	Headwaters of the Santa Ana and San Gabriel rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temps of 17-20 C. Usually inhabits shallow cobble and gravel riffles.	The aquatic habitats required by this species do not exist in the Program area. Therefore, this species is considered absent from the Program area.
<i>Ribes divaricatum</i> var. <i>parishii</i>	Parish's gooseberry	None/ None	G5TX; SX; CNPS: 1A	Riparian woodland. Salix swales in riparian habitats. 65-300 m.	One historic occurrence (1917) documented in the 4-quad CNDDB query. Occurrence potential is low .
	Riversidian Alluvial Fan Sage Scrub	None/ None	G1; S1.1		This habitat is present adjacent 5 th Street, between Church Street and SR-210, along City Creek.
<i>Schoenus nigricans</i>	black bog-rush	None/ None	G4; S2; CNPS: 2B.2	Marshes and swamps. Often in alkaline marshes. 120-1525 m.	The microhabitats this species is associated with are absent from the Program area. Occurrence potential is low .
<i>Senecio aphanactis</i>	chaparral ragwort	None/ None	G3; S2; CNPS: 2B.2	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-1020 m.	The microhabitats this species is associated with are absent from the Program area. Occurrence potential is low .

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Setophaga petechia</i>	yellow warbler	None/ None	G5; S3; CDFW: SSC	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Sidalcea malviflora</i> <i>ssp. dolosa</i>	Bear Valley checkerbloom	None/ None	G5T2; S2; CNPS: 1B.2	Meadows and seeps, riparian woodland, lower montane coniferous forest, upper montane coniferous forest. Known from wet areas within forested habitats. Affected by hydrological changes. 1575-2590 m.	The Program area is outside the know elevation range for this species. Occurrence potential is low .
<i>Sidalcea</i> <i>neomexicana</i>	salt spring checkerbloom	None/ None	G4; S2; CNPS: 2B.2	Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub. Alkali springs and marshes. 3-2380 m.	Only two historic occurrences (1906) documented in the 4-quad CNDDB query and the microhabitats this species is typically associated with are absent from the Program area. Occurrence potential is low .
	Southern Coast Live Oak Riparian Forest	None/ None	G4; S4		This habitat is absent from the Program area.
	Southern Cottonwood Willow Riparian Forest	None/ None	G3; S3.2		This habitat is absent from the Program area.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
	Southern Mixed Riparian Forest	None/ None	G2; S2.1		This habitat is absent from the Program area.
	Southern Riparian Scrub	None/ None	G3; S3.2		This habitat (mulefat thicket) is present adjacent 5 th Street between Church Street and SR- 210, within City Creek.
	Southern Sycamore Alder Riparian Woodland	None/ None	G4; S4		This habitat is absent from the Program area.
<i>Spea hammondi</i>	western spadefoot	Proposed Threatened/ None	G2G3; S3S4; CDFW: SSC	Occurs primarily in grassland habitats but can be found in valley- foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Sphenopholis obtusata</i>	prairie wedge grass	None/ None	G5; S2; CNPS: 2B.2	Cismontane woodland, meadows and seeps. Open moist sites, along rivers and springs, alkaline desert seeps. 15-2625 m.	Two historic occurrences (1907, 1917) documented in the 4-quad CNDDB query. Occurrence potential is low .
<i>Streptanthus bernardinus</i>	Laguna Mountains jewelflower	None/ None	G3G4; S3S4; CNPS: 4.3	Chaparral, lower montane coniferous forest. Clay or decomposed granite soils; sometimes in disturbed areas such as stream sides or roadcuts. 1440- 2500 m.	The Program area is outside the know elevation range for this species. Occurrence potential is low .
<i>Streptanthus campestris</i>	southern jewelflower	None/ None	G3; S3; CNPS: 1B.3	Chaparral, lower montane coniferous forest, pinyon, and juniper woodland. Open, rocky areas. 605-2590 m.	The Program area is outside the know elevation range for this species. Occurrence potential is low .

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Symphotrichum defoliatum</i>	San Bernardino aster	None/ None	G2; S2; CNPS: 1B.2	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley, and foothill grassland. Vernal mesic grassland or near ditches, streams, and springs; disturbed areas. 3-2045 m.	Two historic occurrences (1917, 1939) documented in the 4-quad CNDDDB query. Occurrence potential is low .
<i>Taxidea taxus</i>	American badger	None/ None	G5; S3; CDFW: SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils, and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	There is no suitable habitat for this species in the Program area. Occurrence potential is low .
<i>Thamnophis hammondi</i>	two-striped gartersnake	None/ None	G4; S3S4; CDFW: SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	There is suitable habitat for this species adjacent 5 th Street between Church Street and SR-210, within City Creek. Occurrence potential is moderate adjacent 5 th Street between Church Street and SR-210.
<i>Vireo bellii pusillus</i>	least Bell's vireo	Endangered/ Endangered	G5T2; S3	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, <i>Baccharis</i> , mesquite.	Some potentially suitable habitat for this species exists adjacent 5 th Street between Church Street and SR-210, within City Creek, and LBVI have been documented in City Creek (2016) approx. 1.6 miles N (upstream) of the 5 th Street bridge. Occurrence potential is moderate adjacent 5 th Street between Church Street and SR-210.

Coding and Terms

E = Endangered T = Threatened C = Candidate FP = Fully Protected SSC = Species of Special Concern R = Rare

State Species of Special Concern: An administrative designation given to vertebrate species that appear to be vulnerable to extinction because of declining populations, limited acreages, and/or continuing threats. Raptor and owls are protected under section 3502.5 of the California Fish and Game code: "It is unlawful to take, possess or destroy any birds in the orders Falconiformes or Strigiformes or to take, possess or destroy the nest or eggs of any such bird."

State Fully Protected: The classification of Fully Protected was the State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians and reptiles. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

Global Rankings (Species or Natural Community Level):

G1 = Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.

G2 = Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.

G3 = Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.

G4 = Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.

G5 = Secure – Common; widespread and abundant.

Subspecies Level: Taxa which are subspecies or varieties receive a taxon rank (T-rank) attached to their G-rank. Where the G-rank reflects the condition of the entire species, the T-rank reflects the global situation of just the subspecies. For example: the Point Reyes mountain beaver, *Aplodontia rufa* ssp. *phaea* is ranked G5T2. The G-rank refers to the whole species range i.e., *Aplodontia rufa*. The T-rank refers only to the global condition of ssp. *phaea*.

State Ranking:

S1 = Critically Imperiled – Critically imperiled in the State because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the State.

S2 = Imperiled – Imperiled in the State because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the State.

S3 = Vulnerable – Vulnerable in the State due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the State.

S4 = Apparently Secure – Uncommon but not rare in the State; some cause for long-term concern due to declines or other factors.

S5 = Secure – Common, widespread, and abundant in the State.

California Rare Plant Rankings (CNPS List):

1A = Plants presumed extirpated in California and either rare or extinct elsewhere.

1B = Plants rare, threatened, or endangered in California and elsewhere.

2A = Plants presumed extirpated in California, but common elsewhere.

2B = Plants rare, threatened, or endangered in California, but more common elsewhere.

3 = Plants about which more information is needed; a review list.

4 = Plants of limited distribution; a watch list.

Threat Ranks:

.1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 = Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

.3 = Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Appendix B. Site Photos

East Elevation

☼ 272°W (T) LAT: 34.106595 LON: -117.226617 ±13ft ▲ 1141ft



Photo 1. Looking W (downstream) along the City Creek Bypass Channel from the intersection of Victoria Ave and 3rd St.

East Elevation

☼ 267°W (T) LAT: 34.107251 LON: -117.251471 ±13ft ▲ 1097ft



Photo 2. Looking W (downstream) along the City Creek Bypass Channel from the Del Rosa Dr crossing, between 4th St and E 5th St.

East Elevation

☼ 267°W (T) LAT: 34.104687 LON: -117.268952 ±13ft ▲ 1051ft



Photo 3. Looking W (downstream) along the City Creek Bypass Channel from the intersection of E Little 3rd St and Pine St.

East Elevation

☼ 263°W (T) LAT: 34.106955 LON: -117.243890 ±13ft ▲ 1113ft



Photo 4. Looking SW along 3rd St from the intersection of 3rd St and Sterling Ave.

West Elevation

☉ 97°E (T) LAT: 34.110064 LON: -117.243507 ±13ft ▲ 1112ft



Photo 5. Looking E along the S side of 6th St from the intersection of 6th St and Sterling Ave.

SE corner 6th/Sterling
Eric Weis, HDR Biologist

IVIC Survey
26 Apr 2024, 12:06:56

North Elevation

☉ 179°S (T) LAT: 34.108357 LON: -117.226341 ±13ft ▲ 1158ft



Photo 6. Looking S Victoria Ave from the intersection of 5th St and Victoria Ave.

SW Corner 5th/Victoria
Eric Weis, HDR Biologist

IVIC Survey
28 Apr 2024, 11:27:17

West Elevation

☉ 86°E (T) LAT: 34.108630 LON: -117.221457 ±13ft ▲ 1176ft



Photo 7. Looking E along 5th St from the intersection of 5th St and Cunningham St.

E Corner Cunningham/5th
Eric Weis, HDR Biologist

IVIC Survey
28 Apr 2024, 13:20:47

West Elevation

☉ 93°E (T) LAT: 34.107401 LON: -117.204583 ±13ft ▲ 1218ft



Photo 8. Looking E along 5th St from the intersection of 5th St and Church Ave.

5th/Church
Eric Weis, HDR Biologist

IVIC Survey
28 Apr 2024, 13:51:55

East Elevation

☉ 283°W (T) LAT: 34.108076 LON: -117.201313 ±13ft ▲ 1223ft



Photo 9. Looking W at City Creek from the NE corner of the 5th St Bridge.

South East Elevation

☉ 310°NW (T) LAT: 34.106378 LON: -117.199797 ±13ft ▲ 1236ft



Photo 10. Looking NW at alluvial fan sage scrub habitat adjacent the S side of 5th St; W of the SR-210 southbound on-ramp.

Appendix C. Plant Species List

List of Plant Species Observed in the Program Area

Scientific Name	Common Name	Life Form	Wetland Indicator
Amaranthaceae	Amaranth Family		
<i>Amaranthus albus</i> *	Pigweed amaranth*	Annual herb	FACU
Anacardiaceae	Cashew Family		
<i>Schinus molle</i> **	Peruvian pepper tree**	Tree	FACU
Apocynaceae	Dogbane Family		
<i>Nerium oleander</i> *	Oleander*	Tree	NL – UPL
Areaceae	Palm Family		
<i>Washingtonia robusta</i> **	Mexican fan palm**	Tree	FACW
Asteraceae	Aster Family		
<i>Artemisia californica</i>	California sagebrush	Shrub	NL – UPL
<i>Baccharis salicifolia</i>	Mule fat	shrub	FAC
<i>Centaurea solstitialis</i> **	Yellow star thistle**	Annual herb	NL – UPL
<i>Encelia farinosa</i>	Brittlebush	Shrub	NL – UPL
<i>Helianthus annuus</i>	Hairy leaved sunflower	Annual herb	FACU
<i>Heterotheca grandiflora</i>	Telegraph weed	Annual or perennial herb	NL – UPL
<i>Lepidospartum squamatum</i>	Scale broom	shrub	FACU
<i>Sonchus asper</i> *	Spiny sowthistle*	Annual herb	FAC
Boraginaceae	Forget-me-not Family		
<i>Amsinckia intermedia</i>	Common fiddleneck	Annual herb	NL – UPL
Brassicaceae	Mustard Family		
<i>Hirschfeldia incana</i> **	Short podded mustard**	Perennial herb	NL – UPL
Cactaceae	Cactus Family		
<i>Opuntia littoralis</i>	Coast prickly pear	Shrub (stem succulent)	NL – UPL
Chenopodiaceae	Goosefoot Family		
<i>Salsola tragus</i> **	Russian thistle**	Annual herb	FACU
Fabaceae	Legume Family		
<i>Acemispom glaber</i>	Deerweed	Perennial herb	NL – UPL
<i>Melilotus indicus</i> *	Annual yellow sweetclover*	Annual herb	FACU
Geraniaceae	Geranium Family		
<i>Erodium cicutarium</i> **	Coastal heron's bill**	Annual herb	NL – UPL
Euphorbiaceae	Spurge Family		

Scientific Name	Common Name	Life Form	Wetland Indicator
<i>Croton setiger</i>	Turkey-mullein	Annual herb	NL – UPL
<i>Ricinus communis</i> **	Castor bean**	Shrub	FACU
Lamiaceae	Mint Family		
<i>Salvia columbariae</i>	Chia sage	Annual herb	NL – UPL
Malvaceae	Mallow Family		
<i>Malva parviflora</i> *	Cheeseweed mallow*	Annual herb	NL – UPL
Meliaceae	Mahogany Family		
<i>Melia azedarach</i> *	Persian lilac*	Tree	UPL
Myrtaceae	Myrtle family		
<i>Eucalyptus</i> spp*	Eucalyptus	Tree	NL – UPL
Poaceae	Grass Family		
<i>Avena barbata</i> **	Slender oat**	Annual grass	NL – UPL
<i>Avena fatua</i> **	Wild oat**	Annual grass	NL – UPL
<i>Bromus diandrus</i> **	Ripgut brome**	Annual grass	NL – UPL
<i>Bromus madritensis</i> *	Spanish brome*	Annual grass	UPL
<i>Hordeum murinum</i> ssp. <i>murinum</i> **	Wall barley**	Annual grass	FACU
<i>Pennisetum setaceum</i> **	Fountaingrass**	Perennial grass	NL – UPL
Phrymaceae	Lopseed Family		
<i>Erythranthe guttata</i>	Seep monkey flower	Annual or perennial herb (rhizomatous)	OBL
Platanaceae	Plane-tree Family		
<i>Platanus racemosa</i>	California sycamore	Tree	FAC
Polygonaceae	Buckwheat Family		
<i>Eriogonum fasciculatum</i>	California buckwheat	Shrub	NL – UPL
Salicaceae	Willow Family		
<i>Populus fremontii</i>	Fremont cottonwood	Tree	FAC
Simaroubaceae	Quassia Family		
<i>Ailanthus altissima</i> **	Tree of heaven**	Tree	FACU
Solanaceae	Nightshade Family		
<i>Nicotiana glauca</i> **	Tree tobacco**	Tree or shrub	FAC
Tamaricaceae	Tamarisk Family		
<i>Tamarix ramosissima</i> **	Tamarisk**	Tree or shrub	FAC

Notes:

*Non-native

**Invasive, non-native

FAC = facultative

FACU = facultative upland

FACW = facultative wetland

NL = not listed

OBL = obligate wetland

UPL = obligate upland

Appendix D. Soil Map

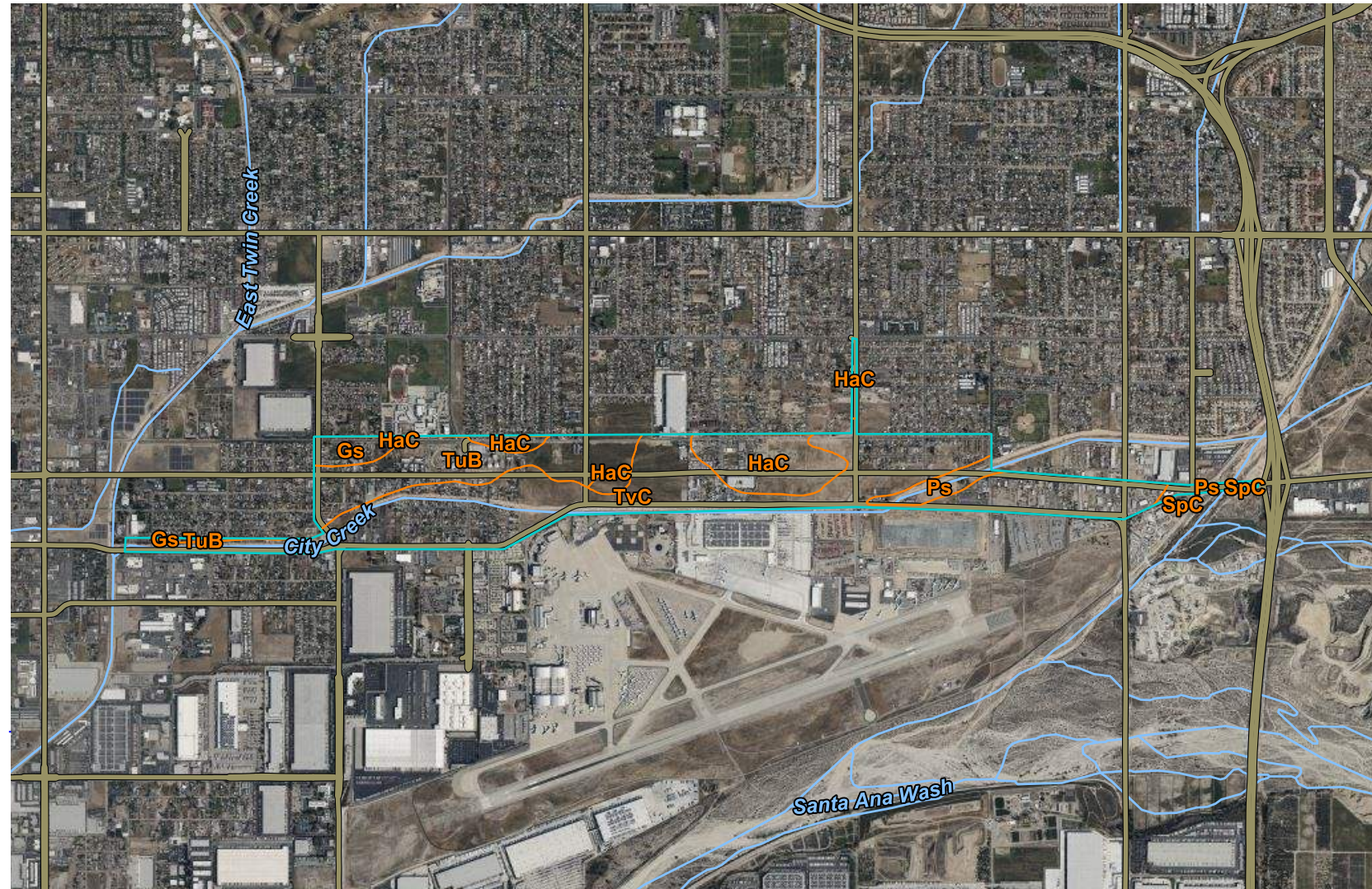
Soil Map—San Bernardino County Southwestern Part, California
(IVIC Program)

117° 16' 51" W

117° 11' 34" W

34° 8' 1" N

34° 8' 1" N



34° 5' 10" N

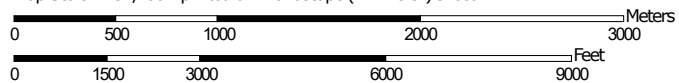
34° 5' 10" N

117° 16' 51" W

117° 11' 34" W



Map Scale: 1:37,200 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

5/13/2024
Page 1 of 3

Soil Map—San Bernardino County Southwestern Part, California
(IVIC Program)

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

-  Soil Map Unit Polygons
-  Soil Map Unit Lines
-  Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

-  Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

-  Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County Southwestern Part, California
Survey Area Data: Version 15, Aug 30, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 17, 2022—Jun 12, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Gs	Grangeville fine sandy loam, saline-alkali	18.9	3.1%
HaC	Hanford coarse sandy loam, 2 to 9 percent slopes	82.7	13.3%
Ps	Psamments, Fluvents and Frequently flooded soils	20.4	3.3%
SoC	Soboba gravelly loamy sand, 0 to 9 percent slopes	0.1	0.0%
SpC	Soboba stony loamy sand, 2 to 9 percent slopes	6.0	1.0%
TuB	Tujunga loamy sand, 0 to 5 percent slopes	117.9	19.0%
TvC	Tujunga gravelly loamy sand, 0 to 9 percent slopes	373.6	60.3%
Totals for Area of Interest		619.7	100.0%

Appendix E. Regulatory Framework

Federal Regulations

Clean Water Act

The purpose of the Clean Water Act (CWA) of 1977 is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” Section 404 of the CWA prohibits the discharge of dredged or fill material into “waters of the United States” (WOTUS) without a permit from the United States Army Corps of Engineers (USACE). The definition of waters of the United States includes rivers, streams, estuaries, territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas “that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 Code of Federal Regulations [CFR] 328.3 7b). The U.S. Environmental Protection Agency (EPA) also has authority over wetlands and may override a USACE permit. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; in California this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

Federal Endangered Species Act (ESA)

The federal Endangered Species Act (ESA) of 1973 protects plants and wildlife that are listed by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) as endangered or threatened. Section 9 of the ESA (USA) prohibits the taking of endangered wildlife, where taking is defined as any effort to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct” (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 United States Code [USC] 1538). Under Section 7 of the ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect an endangered species (including plants) or its Critical Habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity, provided the action will not jeopardize the continued existence of the species. The ESA specifies that the USFWS designate habitat for a species at the time of its listing in which are found the physical or biological features “essential to the conservation of the species,” or which may require “special Management consideration or protection...” (16 USC § 1533[a][3].2; 16 USC § 1532[a]). This designated Critical Habitat is then afforded the same protection under the ESA as individuals of the species itself, requiring issuance of an Incidental Take Permit prior to any activity that results in “the destruction or adverse modification of habitat determined to be critical” (16 USC § 1536[a][2]).

Interagency Consultation and Biological Assessments

Section 7 of ESA provides a means for authorizing the “take” of threatened or endangered species by federal agencies, and applies to actions that are conducted, permitted, or funded by a federal agency. The statute requires federal agencies to consult with the USFWS or National Marine Fisheries Service (NMFS), as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of Critical Habitat for these species. If a Proposed Project “may affect” a listed species or destroy or modify Critical Habitat, the lead agency is required to prepare a biological assessment evaluating the nature and severity of the potential effect.

Habitat Conservation Plans

Section 10 of the federal ESA requires the acquisition of an Incidental Take Permit (ITP) from the USFWS by non-federal landowners for activities that might incidentally harm (or “take”) endangered or threatened wildlife on their land. To obtain a permit, an applicant must develop a Habitat Conservation Plan that is designed to offset any harmful impacts the proposed activity might have on the species.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 U.S.C. Sections 661 to 667e et seq.) applies to any federal Project where any body of water is impounded, diverted, deepened, or otherwise modified. Project proponents are required to consult with the USFWS and the appropriate state wildlife agency.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (The Eagle Act) (1940), amended in 1962, was originally implemented for the protection of bald eagles (*Haliaeetus leucocephalus*). In 1962, Congress amended the Eagle Act to cover golden eagles (*Aquila chrysaetos*), a move that was partially an attempt to strengthen protection of bald eagles, since the latter were often killed by people mistaking them for golden eagles. This act makes it illegal to import, export, take (molest or disturb), sell, purchase, or barter any bald eagle or golden eagle or part thereof. The golden eagle, however, is accorded somewhat lighter protection under the Eagle Act than that of the bald eagle.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 implements international treaties between the United States and other nations created to protect migratory birds, any of their parts, eggs, and nests from activities, such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR Part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code (CFGC).

Executive Orders (EO)

Invasive Species – EO 13112 (1999): Issued on February 3, 1999, promotes the prevention and introduction of invasive species and provides for their control and minimizes the economic, ecological, and human health impacts that invasive species cause through the creation of the Invasive Species Council and Invasive Species Management Plan.

Migratory Bird – EO 13186 (2001): Issued on January 10, 2001, promotes the conservation of migratory birds and their habitats and directs federal agencies to implement the Migratory Bird Treaty Act. Protection and Enhancement of Environmental Quality – EO 11514 (1970a), issued on March 5, 1970, supports the purpose and policies of the National Environmental Policy Act (NEPA) and directs federal agencies to take measures to meet national environmental goals.

Migratory Bird Treaty Reform Act

The Migratory Bird Treaty Reform Act (Division E, Title I, Section 143 of the Consolidated Appropriations Act, 2005, PL 108–447) amends the Migratory Bird Treaty Act (16 U.S.C. Sections 703 to 712) such that nonnative birds or birds that have been introduced by humans to the United States or its territories are excluded from protection under the Act. It defines a native migratory bird as a species present in the United States and its territories as a result of natural biological or ecological processes. This list excluded two additional species commonly observed in the United States, the rock pigeon (*Columba livia*) and domestic goose (*Anser domesticus*).

Birds of Conservation Concern

Birds of Conservation Concern (BCC) is a USFWS list of bird species identified to have the highest conservation priority, and with the potential for becoming candidates for listing as federally threatened or endangered. The chief legal authority for BCC is the Fish and Wildlife Conservation Act of 1980 (FWCA). Other authorities include the FESA, the Fish and Wildlife Act of 1956, and the Department of the Interior U.S Code (16 U.S.C. § 701). The 1988 amendment to the FWCA (Public Law 100-653, Title VIII) requires the Secretary of the Interior, through the USFWS, to “identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973” (USFWS, 2008a).

State Regulations

California Fish and Game Code Sections 1600 through 1607 of the CFGC

This section requires that a Streambed Alteration Application be submitted to the CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” The CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the Department and the applicant is the Streambed Alteration Agreement. Often, Projects that require a Streambed Alteration Agreement also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the Streambed Alteration Agreement may overlap.

California Porter-Cologne Water Quality Control Act

The Porter-Cologne Act is the principal law governing water quality in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. Unlike the federal CWA, Porter-Cologne applies to both surface water and ground water. Porter-Cologne designated the State Water Resources Control Board (State Board) as the statewide water quality planning agency, and also gave authority to the RWQCB. Beyond establishment of a state framework, this act has been revised to comply with the federal CWA.

The State Board is responsible for developing statewide water quality plans (e.g., Ocean Plan, Inland Surface Waters Plan), while the RWQCB is responsible for developing Regional Water Quality Plans (basin plans). The basin plans in turn are approved by the State Board and EPA. Amendments to basin plans, such as Total Maximum Daily Loads (TMDLs), must also be approved by the Office of Administrative Law. These plans, both statewide and basin, include the identification of beneficial uses, water quality objectives, and implementation plans. The RWQCB has the primary responsibility for implementing the provisions in both statewide and basin plans.

California Endangered Species Act

The California Endangered Species Act (CESA) (Sections 2050 to 2085) establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats by protecting “all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation.” Animal species are listed by the CDFW as threatened or endangered, and plants are listed as rare, threatened, or endangered. However, only those plant species listed as threatened or endangered receive protection under the California ESA.

CESA mandates that state agencies do not approve a Project that would jeopardize the continued existence of these species if reasonable and prudent alternatives are available that would avoid a jeopardy finding. There are no state agency consultation procedures under the California ESA. For Projects that would affect a species that is federally and state listed, compliance with ESA satisfies the California ESA if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is consistent with the CESA under Section 2080.1. For Projects that would result in take of a species that is state listed only, the Project sponsor must apply for a take permit, in accordance with Section 2081(b).

Fully Protected Species

Four sections of the California Fish and Game Code (CFGF) list 37 fully protected species (CFGF Sections 3511, 4700, 5050, and 5515). These sections prohibit take or possession “at any time” of the species listed, with few exceptions, and state that “no provision of this code or any other law will be construed to authorize the issuance of permits or licenses to ‘take’ the species,” and that no previously issued permits or licenses for take of the species “shall have any force or effect” for authorizing take or possession.

Bird Nesting Protections

Bird nesting protections (Sections 3503, 3503.5, 3511, 3513 and 3800) in the CFGF include the following:

- Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.
- Section 3503.5 prohibits the take, possession, or needless destruction of any nests, eggs, or birds in the orders Falconiformes (new world vultures, hawks, eagles, ospreys, and falcons, among others), and Strigiformes (owls).
- Section 3511 prohibits the take or possession of Fully protected birds.
- Section 3513 prohibits the take or possession of any migratory nongame bird or part thereof, as designated in the MBTA. To avoid violation of the take provisions, it is generally required that Project-related disturbance at active nesting territories be reduced or eliminated during the nesting cycle.
- Section 3800 prohibits the take of any non-game bird (i.e., bird that is naturally occurring in California that is not a gamebird, migratory game bird, or fully protected bird).

Native Plant Protection Act

The Native Plant Protect Act (NPPA) (1977) (CFGF Sections 1900-1913) was created with the intent to “preserve, protect, and enhance rare and endangered plants in this State.” The NPPA is

administered by CDFW. The Fish and Game Commission has the authority to designate native plants as endangered or rare and to protect endangered and rare plants from take. CESA (CFGF 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the Fish and Game Code.

Appendix F. USFWS IPaC, CNDDDB, and CNPSEI Species Lists

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

San Bernardino County, California



Local office

Carlsbad Fish And Wildlife Office

☎ (760) 431-9440

📅 (760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

-
1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
San Bernardino Merriam's Kangaroo Rat <i>Dipodomys merriami parvus</i> Wherever found There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/2060	Endangered
Stephens' Kangaroo Rat <i>Dipodomys stephensi</i> (incl. <i>D. cactus</i>) Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3495	Threatened

Birds

NAME	STATUS
Coastal California Gnatcatcher <i>Polioptila californica californica</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo <i>Vireo bellii pusillus</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6749	Endangered

Reptiles

NAME	STATUS
Southwestern Pond Turtle <i>Actinemys pallida</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4768	Proposed Threatened

Amphibians

NAME	STATUS
Western Spadefoot <i>Spea hammondi</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5425	Proposed Threatened

Fishes

NAME	STATUS
Santa Ana Sucker <i>Catostomus santaanae</i> There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/3785	Threatened

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS
Gambel's Watercress <i>Rorippa gambellii</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4201	Endangered

Lassics Lupine *Lupinus constancei* Endangered

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/7976>

Nevin's Barberry *Berberis nevinii* Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/8025>

San Diego Ambrosia *Ambrosia pumila* Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/8287>

Santa Ana River Woolly-star *Eriastrum densifolium* ssp. Endangered

sanctorum

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/6575>

Slender-horned Spineflower *Dodecahema leptoceras* Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/4007>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
San Bernardino Merriam's Kangaroo Rat <i>Dipodomys merriami parvus</i> https://ecos.fws.gov/ecp/species/2060#crithab	Final
Santa Ana Sucker <i>Catostomus santaanae</i> https://ecos.fws.gov/ecp/species/3785#crithab	Final

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below.

Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31

Golden Eagle *Aquila chrysaetos*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

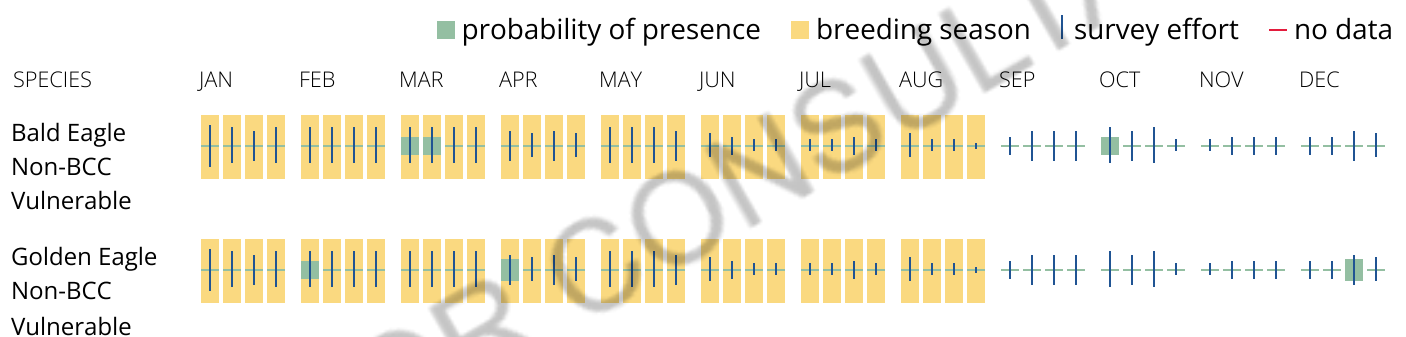
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid

cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around

your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Allen's Hummingbird <i>Selasphorus sasin</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow <i>Passerculus sandwichensis beldingi</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Black-chinned Sparrow <i>Spizella atrogularis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9447	Breeds Apr 15 to Jul 31
Bullock's Oriole <i>Icterus bullockii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
California Gull <i>Larus californicus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31

California Thrasher <i>Toxostoma redivivum</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Clark's Grebe <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
Common Yellowthroat <i>Geothlypis trichas sinuosa</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lawrence's Goldfinch <i>Spinus lawrencei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Northern Harrier <i>Circus hudsonius</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350	Breeds Apr 1 to Sep 15
Nuttall's Woodpecker <i>Dryobates nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15

Olive-sided Flycatcher *Contopus cooperi*

Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3914>

Santa Barbara Song Sparrow *Melospiza melodia graminea*

Breeds Mar 1 to Sep 5

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/5513>

Tricolored Blackbird *Agelaius tricolor*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3910>

Western Grebe *aechmophorus occidentalis*

Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/6743>

Western Screech-owl *Megascops kennicottii cardonensis*

Breeds Mar 1 to Jun 30

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Wrentit *Chamaea fasciata*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey

effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

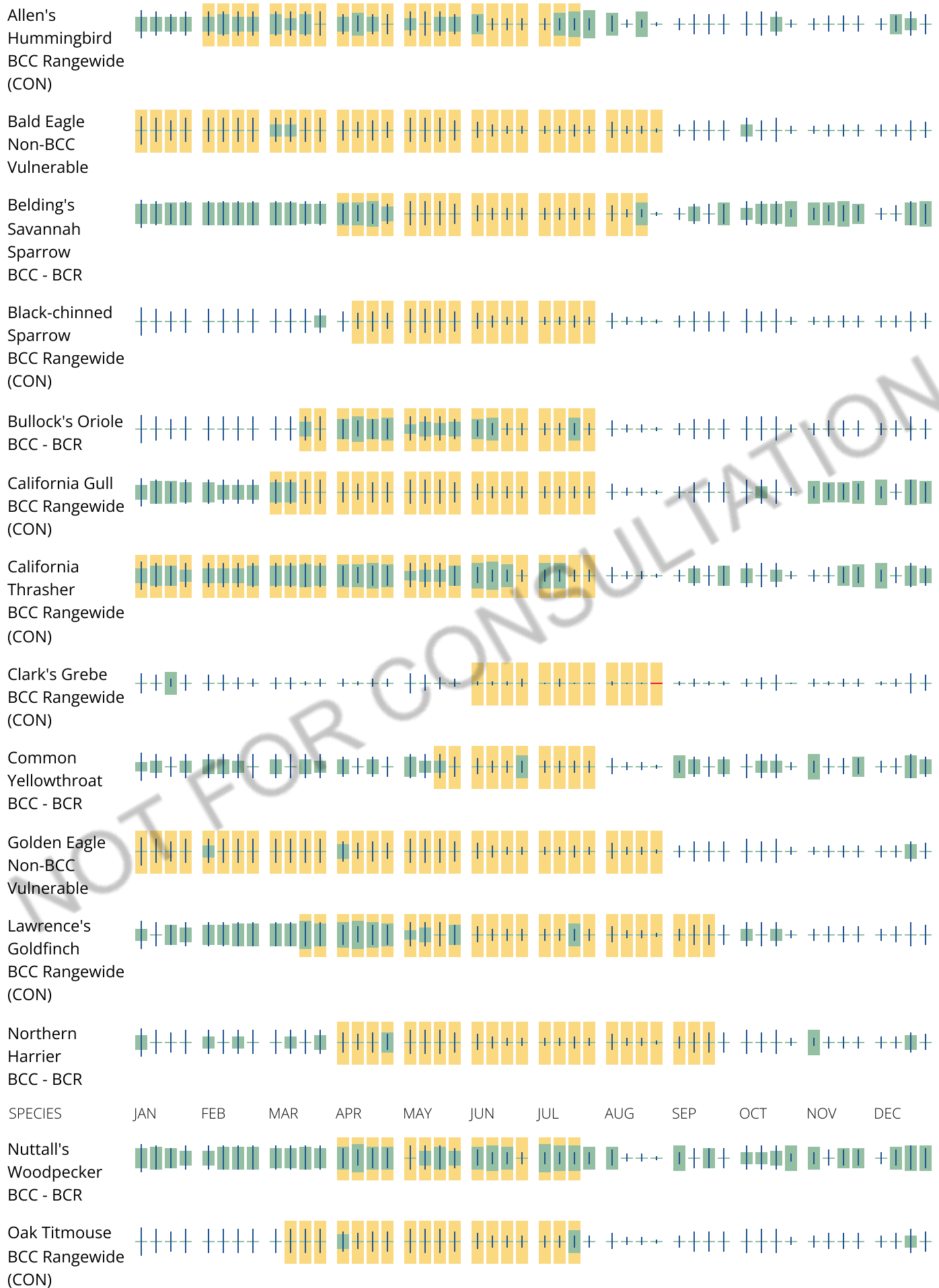
No Data (—)

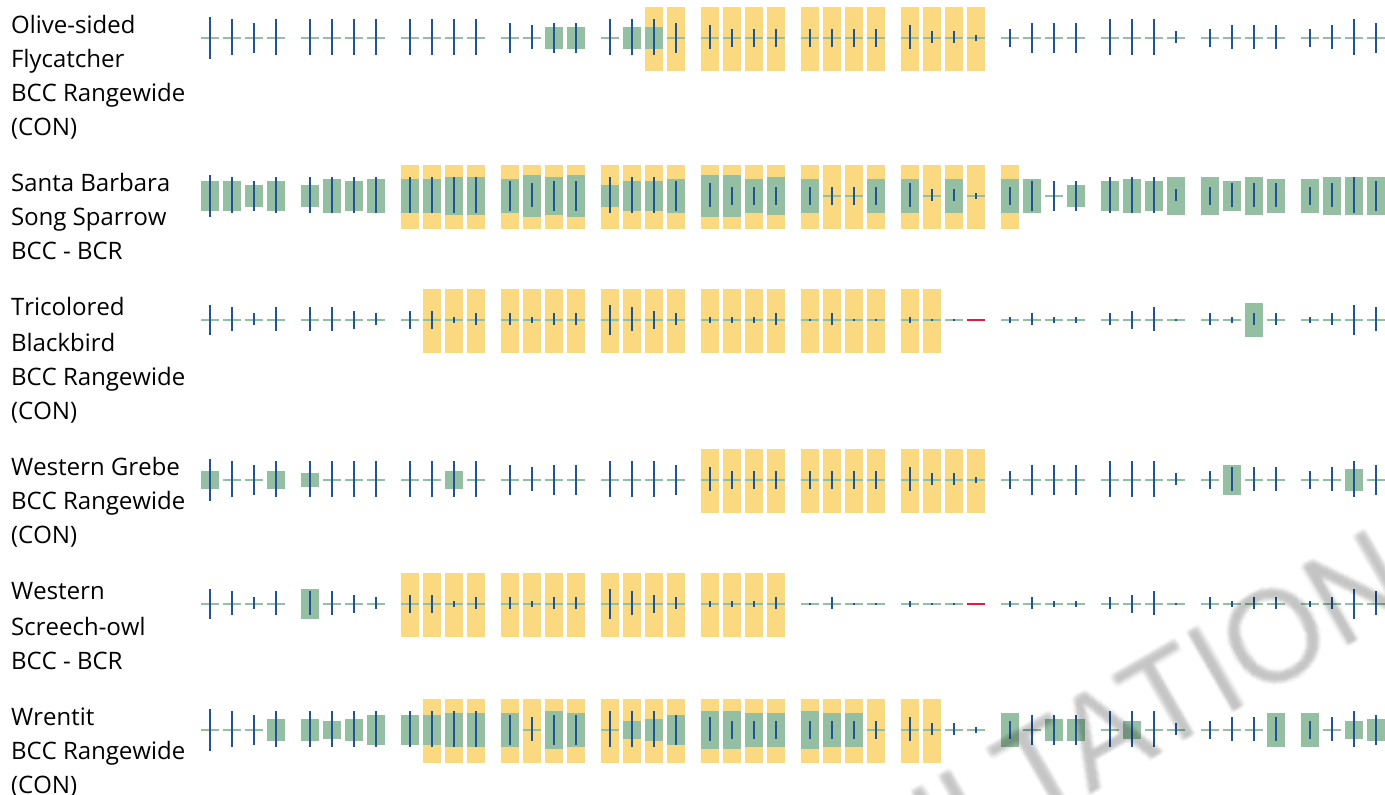
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.







Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact

[Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

[R5UBF](#)

[R4SBC](#)

[R5UBFx](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Query Criteria: Quad> IS San Bernardino South (3411713)> OR San Bernardino North (3411723)> OR Redlands (3411712)> OR Harrison Mtn. (3411722)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Accipiter cooperii</i> Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S2	SSC
<i>Alimophila ruficeps canescens</i> southern California rufous-crowned sparrow	ABPBX91091	None	None	G5T3	S4	WL
<i>Allium howellii</i> var. <i>clokeyi</i> Mt. Pinos onion	PMLIL02161	None	None	G4T2	S2	1B.3
<i>Anniella stebbinsi</i> Southern California legless lizard	ARACC01060	None	None	G3	S3	SSC
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G4	S3	SSC
<i>Arenaria paludicola</i> marsh sandwort	PDCAR040L0	Endangered	Endangered	G1	S1	1B.1
<i>Arizona elegans occidentalis</i> California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
<i>Artemisiospiza belli belli</i> Bell's sparrow	ABPBX97021	None	None	G5T2T3	S3	WL
<i>Aspidoscelis hyperythra</i> orange-throated whiptail	ARACJ02060	None	None	G5	S2S3	WL
<i>Aspidoscelis tigris stejnegeri</i> coastal whiptail	ARACJ02143	None	None	G5T5	S3	SSC
<i>Astragalus hornii</i> var. <i>hornii</i> Horn's milk-veitch	PDFAB0F421	None	None	GUT1	S1	1B.1
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S2	SSC
<i>Batrachoseps gabrieli</i> San Gabriel slender salamander	AAAAAD02110	None	None	G2G3	S2S3	
<i>Berberis nevadensis</i> Nevin's barberry	PDBER060A0	Endangered	Endangered	G1	S1	1B.1
<i>Bombus crotchii</i> Crotch's bumble bee	IIHYM24480	None	Candidate Endangered	G2	S2	
<i>Bombus morrisi</i> Morrison bumble bee	IIHYM24460	None	None	G3	S1S2	
<i>Bombus pensylvanicus</i> American bumble bee	IIHYM24260	None	None	G3G4	S2	
<i>Brodiaea filifolia</i> thread-leaved brodiaea	PMLIL0C050	Threatened	Endangered	G2	S2	1B.1



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Buteo swainsoni</i> Swainson's hawk	ABNKC19070	None	Threatened	G5	S4	
<i>Calochortus palmeri</i> var. <i>palmeri</i> Palmer's mariposa-lily	PMLL0D122	None	None	G3T2	S2	1B.2
<i>Calochortus plummerae</i> Plummer's mariposa-lily	PMLL0D150	None	None	G4	S4	4.2
<i>Carex comosa</i> bristly sedge	PMCCYP032Y0	None	None	G5	S2	2B.1
<i>Castilleja lasiorhyncha</i> San Bernardino Mountains owl's-clover	PDSCRD0410	None	None	G2?	S2?	1B.2
<i>Catostomus santanae</i> Santa Ana sucker	AFCJC02190	Threatened	None	G1	S1	SSC
<i>Centronadia pungens</i> ssp. <i>laevis</i> smooth tarplant	PDAST4R0R4	None	None	G3G4T2	S2	1B.1
<i>Chaetodipus fallax fallax</i> northwestern San Diego pocket mouse	AMAFD05031	None	None	G5T3T4	S3S4	
<i>Charina umbratica</i> southern rubber boa	ARADA01011	None	Threatened	G2G3	S2	
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i> salt marsh bird's-beak	PDSCRJ0JC2	Endangered	Endangered	G4?T1	S1	1B.2
<i>Chorizanthe parryi</i> var. <i>parryi</i> Parry's spineflower	PDPGN040J2	None	None	G3T2	S2	1B.1
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
<i>Coleonyx variegatus abbotti</i> San Diego banded gecko	ARACD01031	None	None	G5T5	S1S2	SSC
<i>Crotalus ruber</i> red-diamond rattlesnake	ARADE02090	None	None	G4	S3	SSC
<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i> Peruvian dodder	PDCUS01111	None	None	G5T4?	SH	2B.2
<i>Diadophis punctatus modestus</i> San Bernardino ringneck snake	ARADB10015	None	None	G5T2T3	S2?	
<i>Dipodomys merriami parvus</i> San Bernardino kangaroo rat	AMAFD03143	Endangered	Endangered	G5T1	S1	SSC
<i>Dipodomys stephensi</i> Stephens' kangaroo rat	AMAFD03100	Threatened	Threatened	G2	S3	
<i>Dodecahema leptocerae</i> slender-horned spineflower	PDPGN0V010	Endangered	Endangered	G1	S1	1B.1
<i>Empidonax traillii eximius</i> southwestern willow flycatcher	ABPAE33043	Endangered	Endangered	G5T2	S3	
<i>Eremophila alpestris actia</i> California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i> Santa Ana River woollystar	PDPLM03035	Endangered	Endangered	G4T1	S1	1B.1
<i>Euchloe hyantis andrewsi</i> Andrew's marble butterfly	ILLEPA5032	None	None	G3G4T2	S2	
<i>Eugnosta busckana</i> Busck's gallmoth	ILLEM2X090	None	None	G1G3	S2S3	
<i>Eumops perotis californicus</i> western mastiff bat	AMACD02011	None	None	G4G5T4	S3S4	SSC
<i>Euphydryas editha quino</i> quino checkerspot butterfly	ILLEPK405L	Endangered	None	G4G5T1T2	S1S2	
<i>Falco columbarius</i> merlin	ABNKD06030	None	None	G5	S3S4	WL
<i>Fimbristylis thermalis</i> hot springs fimbriistylis	PMCYP0B0N0	None	None	G4	S1S2	2B.2
<i>Galium californicum</i> ssp. <i>primum</i> Alvin Meadow bedstraw	PDRUB0N0E6	None	None	G5T2	S2	1B.2
<i>Gila orcutti</i> arroyo chub	AFCJB13120	None	None	G2	S2	SSC
<i>Glaucomys oregonensis californicus</i> San Bernardino flying squirrel	AMAFB09021	None	None	G5T1T2	S1S2	SSC
<i>Haliaeetus leucocephalus</i> bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
<i>Helianthus nuttallii</i> ssp. <i>parishii</i> Los Angeles sunflower	PDAST4N102	None	None	G5TX	SX	1A
<i>Heuchera parishii</i> Parish's alumroot	PDSAX0E1F0	None	None	G3	S3	1B.3
<i>Horkelia cuneata</i> var. <i>puberula</i> mesa horkelia	PDR0S0W045	None	None	G4T1	S1	1B.1
<i>Icteria virens</i> yellow-breasted chat	ABPBX24010	None	None	G5	S4	SSC
<i>Imperata brevifolia</i> California satintail	PMPOA3D020	None	None	G3	S3	2B.1
<i>Ivesia argyrocoma</i> var. <i>argyrocoma</i> silver-haired ivesia	PDR0S0X021	None	None	G2T2	S2	1B.2
<i>Lanius ludovicianus</i> loggerhead shrike	ABPBR01030	None	None	G4	S4	SSC
<i>Lasius xanthinus</i> western yellow bat	AMACC05070	None	None	G4G5	S3	SSC
<i>Laterallus jamaicensis coturniculus</i> California black rail	ABNME03041	None	Threatened	G3T1	S2	FP
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson's pepper-grass	PDBRA1M114	None	None	G5T3	S3	4.3



Selected Elements by Scientific Name
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Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	AMAEB03051	None	None	G5T3T4	S3S4	
<i>Lycium parishii</i> Parish's desert-thorn	PDSOL0G0D0	None	None	G4	S1	2B.3
<i>Malacothamnus parishii</i> Parish's bush-mallow	PDMAL0Q0C0	None	None	GXQ	SX	1A
<i>Monardella macrantha ssp. hallii</i> Hall's monardella	PDLAM180E1	None	None	G5T3	S3	1B.3
<i>Monardella pringlei</i> Pringle's monardella	PDLAM180J0	None	None	GX	SX	1A
<i>Nasturtium gambelii</i> Gambel's water cress	PDBRA270V0	Endangered	Threatened	G1	S1	1B.1
<i>Neolaria alba</i> white cuckoo bee	IIHYM81010	None	None	GH	SH	
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	AMAFF08041	None	None	G5T3T4	S3S4	SSC
<i>Nyctinomops temorosacus</i> pocketed free-tailed bat	AMACD04010	None	None	G5	S3	SSC
<i>Oncorhynchus mykiss irideus pop. 10</i> steelhead - southern California DPS	AFCHA0209J	Endangered	Candidate Endangered	G5T1Q	S1	
<i>Onychomys torridus ramona</i> southern grasshopper mouse	AMAFF06022	None	None	G5T3	S3	SSC
<i>Pelazoneuron puberulum var. sonorensense</i> Sonoran maiden fern	PPTHE05192	None	None	G5T3	S2	2B.2
<i>Perideridia parishii ssp. parishii</i> Parish's yampah	PDAP11N0C2	None	None	G4T3T4	S2	2B.2
<i>Perognathus alticola alticola</i> white-eared pocket mouse	AMAFD01081	None	None	G2TH	SH	SSC
<i>Perognathus longimembris brevinasus</i> Los Angeles pocket mouse	AMAFD01041	None	None	G5T2	S1S2	SSC
<i>Phrynosoma blainvillii</i> coast horned lizard	ARACF12100	None	None	G4	S4	SSC
<i>Polioptila californica californica</i> coastal California gnatcatcher	ABPBJ08081	Threatened	None	G4G5T3Q	S2	SSC
<i>Rana draytonii</i> California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
<i>Rana muscosa</i> southern mountain yellow-legged frog	AAABH01330	Endangered	Endangered	G1	S2	WL
<i>Rhaphionidas terminatus abdominalis</i> Delhi Sands flower-loving fly	IIDIP05021	Endangered	None	G1T1	S1	
<i>Rhinichthys osculus ssp. 8</i> Santa Ana speckled dace	AFCJB3705K	None	None	G5T1	S1	SSC



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Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Ribes divaricatum</i> var. <i>parishii</i> Parish's gooseberry	PDGRO020F3	None	None	G5TX	SX	1A
<i>Riversidian Alluvial Fan Sage Scrub</i> Riversidian Alluvial Fan Sage Scrub	CTT32720CA	None	None	G1	S1.1	
<i>Schoenus nigricans</i> black bog-rush	PMCYP0P010	None	None	G4	S2	2B.2
<i>Senecio aphanactis</i> chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
<i>Setophaga petechia</i> yellow warbler	ABPBX03010	None	None	G5	S3	SSC
<i>Sidalcea malviflora</i> ssp. <i>dolosa</i> Bear Valley checkerbloom	PDMAL110FH	None	None	G5T2	S2	1B.2
<i>Sidalcea neomexicana</i> salt spring checkerbloom	PDMAL110J0	None	None	G4	S2	2B.2
<i>Southern Coast Live Oak Riparian Forest</i> Southern Coast Live Oak Riparian Forest	CTT61310CA	None	None	G4	S4	
<i>Southern Cottonwood Willow Riparian Forest</i> Southern Cottonwood Willow Riparian Forest	CTT61330CA	None	None	G3	S3.2	
<i>Southern Mixed Riparian Forest</i> Southern Mixed Riparian Forest	CTT61340CA	None	None	G2	S2.1	
<i>Southern Riparian Scrub</i> Southern Riparian Scrub	CTT63300CA	None	None	G3	S3.2	
<i>Southern Sycamore Alder Riparian Woodland</i> Southern Sycamore Alder Riparian Woodland	CTT62400CA	None	None	G4	S4	
<i>Spea hammondi</i> western spadefoot	AAABF02020	Proposed Threatened	None	G2G3	S3S4	SSC
<i>Sphenopholis obtusata</i> prairie wedge grass	PMPOA5T030	None	None	G5	S2	2B.2
<i>Streptanthus bernardinus</i> Laguna Mountains jewelflower	PDBRA2G060	None	None	G3G4	S3S4	4.3
<i>Streptanthus campestris</i> southern jewelflower	PDBRA2G0B0	None	None	G3	S3	1B.3
<i>Symphyotrichum defoliatum</i> San Bernardino aster	PDASTE80C0	None	None	G2	S2	1B.2
<i>Taxidea taxus</i> American badger	AMAJF04010	None	None	G5	S3	SSC
<i>Thamnophis hammondi</i> two-striped gartersnake	ARADB36160	None	None	G4	S3S4	SSC
<i>Vireo bellii pusillus</i> least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S3	

Record Count: 102



CNPS Rare Plant Inventory

Search Results

63 matches found. Click on scientific name for details

Search Criteria: Quad is one of [3411713:3411723:3411712:3411722]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK
Abronia villosa var. aurita	chaparral sand-verbena	Nyctaginaceae	annual herb	(Jan)Mar-Sep	None	None	G5T2?	S2	1B.1
Acanthoscyphus parishii var. parishii	Parish's oxytheca	Polygonaceae	annual herb	Jun-Sep	None	None	G4?T3T4	S3S4	4.2
Allium howellii var. clokeyi	Mt. Pinos onion	Alliaceae	perennial bulbiferous herb	Apr-Jun	None	None	G4T2	S2	1B.3
Arenaria paludicola	marsh sandwort	Caryophyllaceae	perennial stoloniferous herb	May-Aug	FE	CE	G1	S1	1B.1
Artemisia palmeri	San Diego sagewort	Asteraceae	perennial deciduous shrub	(Feb)May-Sep	None	None	G3?	S3?	4.2
Asplenium vespertinum	western spleenwort	Aspleniaceae	perennial rhizomatous herb	Feb-Jun	None	None	G3?	S4	4.2
Astragalus hornii var. hornii	Horn's milk-vetch	Fabaceae	annual herb	May-Oct	None	None	GUT1	S1	1B.1
Berberis nevinii	Nevin's barberry	Berberidaceae	perennial evergreen shrub	(Feb)Mar-Jun	FE	CE	G1	S1	1B.1
Brodiaea filifolia	thread-leaved brodiaea	Themidaceae	perennial bulbiferous herb	Mar-Jun	FT	CE	G2	S2	1B.1
Calochortus catalinae	Catalina mariposa lily	Liliaceae	perennial bulbiferous herb	(Feb)Mar-Jun	None	None	G3G4	S3S4	4.2
Calochortus palmeri var. palmeri	Palmer's mariposa-lily	Liliaceae	perennial bulbiferous herb	Apr-Jul	None	None	G3T2	S2	1B.2
Calochortus plummerae	Plummer's mariposa-lily	Liliaceae	perennial bulbiferous herb	May-Jul	None	None	G4	S4	4.2
Calochortus simulans	La Panza mariposa-lily	Liliaceae	perennial bulbiferous herb	Apr-Jun	None	None	G2	S2	1B.3
Carex comosa	bristly sedge	Cyperaceae	perennial rhizomatous herb	May-Sep	None	None	G5	S2	2B.1
Castilleja lasiorhyncha	San Bernardino Mountains owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	May-Aug	None	None	G2?	S2?	1B.2
Centromadia pungens ssp. laevis	smooth tarplant	Asteraceae	annual herb	Apr-Sep	None	None	G3G4T2	S2	1B.1

<u><i>Chloropyron maritimum ssp. maritimum</i></u>	salt marsh bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	May-Oct(Nov)	FE	CE	G4?T1	S1	1B.2
<u><i>Chorizanthe leptotheca</i></u>	Peninsular spineflower	Polygonaceae	annual herb	May-Aug	None	None	G3	S3	4.2
<u><i>Chorizanthe parryi</i> var. <i>parryi</i></u>	Parry's spineflower	Polygonaceae	annual herb	Apr-Jun	None	None	G3T2	S2	1B.1
<u><i>Chorizanthe xanti</i> var. <i>leucotheca</i></u>	white-bracted spineflower	Polygonaceae	annual herb	Apr-Jun	None	None	G4T3	S3	1B.2
<u><i>Convolvulus simulans</i></u>	small-flowered morning-glory	Convolvulaceae	annual herb	Mar-Jul	None	None	G4	S4	4.2
<u><i>Cuscuta obtusiflora</i> var. <i>glandulosa</i></u>	Peruvian dodder	Convolvulaceae	annual vine (parasitic)	Jul-Oct	None	None	G5T4?	SH	2B.2
<u><i>Deinandra paniculata</i></u>	paniculate tarplant	Asteraceae	annual herb	(Mar)Apr-Nov	None	None	G4	S4	4.2
<u><i>Dodecahema leptoceras</i></u>	slender-horned spineflower	Polygonaceae	annual herb	Apr-Jun	FE	CE	G1	S1	1B.1
<u><i>Eriastrum densifolium</i> ssp. <i>sanctorum</i></u>	Santa Ana River woollystar	Polemoniaceae	perennial herb	Apr-Sep	FE	CE	G4T1	S1	1B.1
<u><i>Eriophyllum lanatum</i> var. <i>obovatum</i></u>	southern Sierra woolly sunflower	Asteraceae	perennial herb	Jun-Jul	None	None	G5T4	S4	4.3
<u><i>Fimbristylis thermalis</i></u>	hot springs fimbristylis	Cyperaceae	perennial rhizomatous herb	Jul-Sep	None	None	G4	S1S2	2B.2
<u><i>Frasera neglecta</i></u>	pine green-gentian	Gentianaceae	perennial herb	May-Jul	None	None	G4	S4	4.3
<u><i>Fritillaria pinetorum</i></u>	pine fritillary	Liliaceae	perennial bulbiferous herb	May-Jul(Sep)	None	None	G4	S4	4.3
<u><i>Galium californicum</i> ssp. <i>primum</i></u>	Alvin Meadow bedstraw	Rubiaceae	perennial herb	May-Jul	None	None	G5T2	S2	1B.2
<u><i>Galium johnstonii</i></u>	Johnston's bedstraw	Rubiaceae	perennial herb	Jun-Jul	None	None	G4	S4	4.3
<u><i>Helianthus nuttallii</i> ssp. <i>parishii</i></u>	Los Angeles sunflower	Asteraceae	perennial rhizomatous herb	Aug-Oct	None	None	G5TX	SX	1A
<u><i>Heuchera caespitosa</i></u>	urn-flowered alumroot	Saxifragaceae	perennial rhizomatous herb	May-Aug	None	None	G3	S3	4.3
<u><i>Heuchera parishii</i></u>	Parish's alumroot	Saxifragaceae	perennial rhizomatous herb	Jun-Aug	None	None	G3	S3	1B.3
<u><i>Horkelia cuneata</i> var. <i>puberula</i></u>	mesa horkelia	Rosaceae	perennial herb	Feb-Jul(Sep)	None	None	G4T1	S1	1B.1
<u><i>Hulsea vestita</i> ssp. <i>parryi</i></u>	Parry's sunflower	Asteraceae	perennial herb	Apr-Aug	None	None	G5T4	S4	4.3
<u><i>Imperata brevifolia</i></u>	California satintail	Poaceae	perennial rhizomatous herb	Sep-May	None	None	G3	S3	2B.1
<u><i>Ivesia argyrocoma</i> var. <i>argyrocoma</i></u>	silver-haired ivesia	Rosaceae	perennial herb	Jun-Aug	None	None	G2T2	S2	1B.2
<u><i>Juglans californica</i></u>	Southern California black walnut	Juglandaceae	perennial deciduous tree	Mar-Aug	None	None	G4	S4	4.2
<u><i>Juncus duranii</i></u>	Duran's rush	Juncaceae	perennial rhizomatous herb	Jul-Aug	None	None	G3	S3	4.3

<u>Lepidium virginicum</u> <u>var. robinsonii</u>	Robinson's pepper-grass	Brassicaceae	annual herb	Jan-Jul	None	None	G5T3	S3	4.3
<u>Lilium humboldtii</u> <u>ssp. ocellatum</u>	ocellated Humboldt lily	Liliaceae	perennial bulbiferous herb	Mar-Jul(Aug)	None	None	G4T4?	S4?	4.2
<u>Lycium parishii</u>	Parish's desert-thorn	Solanaceae	perennial shrub	Mar-Apr	None	None	G4	S1	2B.3
<u>Malacothamnus parishii</u>	Parish's bushmallow	Malvaceae	perennial deciduous shrub	Jun-Jul	None	None	GXQ	SX	1A
<u>Monardella macrantha</u> <u>ssp. hallii</u>	Hall's monardella	Lamiaceae	perennial rhizomatous herb	Jun-Oct	None	None	G5T3	S3	1B.3
<u>Monardella pringlei</u>	Pringle's monardella	Lamiaceae	annual herb	May-Jun	None	None	GX	SX	1A
<u>Muhlenbergia californica</u>	California muhly	Poaceae	perennial rhizomatous herb	Jun-Sep	None	None	G4	S4	4.3
<u>Nasturtium gambelii</u>	Gambel's water cress	Brassicaceae	perennial rhizomatous herb	Apr-Oct	FE	CT	G1	S1	1B.1
<u>Pelazoneuron puberulum</u> <u>var. sonorens</u>	Sonoran maiden fern	Thelypteridaceae	perennial rhizomatous herb	Jan-Sep	None	None	G5T3	S2	2B.2
<u>Perideridia parishii</u> <u>ssp. parishii</u>	Parish's yampah	Apiaceae	perennial herb	Jun-Aug	None	None	G4T3T4	S2	2B.2
<u>Phacelia mohavensis</u>	Mojave phacelia	Hydrophyllaceae	annual herb	Apr-Aug	None	None	G4Q	S4	4.3
<u>Piperia leptopetala</u>	narrow-petaled rein orchid	Orchidaceae	perennial herb	May-Jul	None	None	G4	S4	4.3
<u>Ribes divaricatum</u> <u>var. parishii</u>	Parish's gooseberry	Grossulariaceae	perennial deciduous shrub	Feb-Apr	None	None	G5TX	SX	1A
<u>Schoenus nigricans</u>	black bog-rush	Cyperaceae	perennial herb	Aug-Sep	None	None	G4	S2	2B.2
<u>Senecio aphanactis</u>	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	None	None	G3	S2	2B.2
<u>Sidalcea malviflora</u> <u>ssp. dolosa</u>	Bear Valley checkerbloom	Malvaceae	perennial herb	May-Aug	None	None	G5T2	S2	1B.2
<u>Sidalcea neomexicana</u>	salt spring checkerbloom	Malvaceae	perennial herb	Mar-Jun	None	None	G4	S2	2B.2
<u>Sidotheca caryophylloides</u>	chickweed oxytheca	Polygonaceae	annual herb	Jul-Sep(Oct)	None	None	G4	S4	4.3
<u>Sphenopholis obtusata</u>	prairie wedge grass	Poaceae	perennial herb	Apr-Jul	None	None	G5	S2	2B.2
<u>Streptanthus bernardinus</u>	Laguna Mountains jewelflower	Brassicaceae	perennial herb	May-Aug	None	None	G3G4	S3S4	4.3
<u>Streptanthus campestris</u>	southern jewelflower	Brassicaceae	perennial herb	(Apr)May-Jul	None	None	G3	S3	1B.3
<u>Symphyotrichum defoliatum</u>	San Bernardino aster	Asteraceae	perennial rhizomatous herb	Jul-Nov	None	None	G2	S2	1B.2
<u>Yucca brevifolia</u>						CC			CBR

Showing 1 to 63 of 63 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2024. Rare Plant Inventory (online edition, v9.5). Website <https://www.rareplants.cnps.org> [accessed 10 May 2024].